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LECTURES ON DERMATOLOGY.

SESSION 1874-5.



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LECTURES ON DERMATOLOGY;

DELIVERED IN
THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,
IN 1874—1875.

INCLUDING

STRUMA; LUPUS; LYMPHADENOMA; XANTHOMA; EPITHELIOMA;
ICHTHYOSIS; SCLERIASIS; VERRUCA; CLAVUS; NÆVUS;
SPARGOSIS; MOLLUSCUM; CHELOMA; PRURIGO.

BY

ERASMUS WILSON, F.R.S., F.R.C.S.

MEMBER OF COUNCIL, AND PROFESSOR OF DERMATOLOGY.



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TO

THOMAS BLIZARD CURLING, F.R.S., F.R.C.S.

THE PRESIDENT OF THE YEAR 1873,

AND

FREDERICK LE GROS CLARK, F.R.S., F.R.C.S.

THE PRESIDENT OF THE YEAR 1874,

This Volume

IS DEDICATED,

WITH SINCERE RESPECT AND ESTEEM,

BY

THE AUTHOR.

P R E F A C E.

THE present volume contains twelve Lectures, delivered in 1874 and 1875; and these form part of a series of discourses on Dermatology which were commenced in 1870, and have now reached thirty-six in number. The former Lectures have already been published in two volumes, in 1871 and 1873.

The plan of these Lectures is to treat consecutively of the whole of the diseases of the skin, in the most convenient order, beginning with diseases of inflammation, common and specific; then taking diseases due to aberration of nutrition and sensation, and proceeding onwards to disorders of pigmentation, diseases of the epidermis and nails, of the cutaneous glandular system, and of the hair.

The first volume, containing six Lectures, was framed as a synopsis of the whole subject. The second volume, consisting of eighteen Lectures, comprehends the diseases of inflammation, common and specific, and the first of the members of the nutritive group.

The diseases of common inflammation being—

Eczema, with its allies, lichen, impetigo, and scabies;

Erythema, with erysipelas and urticaria;

Pemphigus, with miliaria and herpes;

Furunculus, with ecthyma and anthrax; and

Traumatic affections, resulting from the operation of chemical and mechanical irritants and the bites of animals.

The diseases of specific inflammation being—

Exanthemata;

Syphilis; and

Elephantiasis.

And the first of the members of the nutritive group :—

Lepra, or psoriasis vulgaris.

The six Lectures of the present course complete the group of diseases resulting from aberration of nutrition, together with those of innervation.

The diseases of nutrition are considered under the three heads of dystrophy, atrophy, and hypertrophy.

The dystrophic affections, in addition to lepra vulgaris, are—

| | |
|----------------|----------------|
| Struma ; | Xanthoma ; and |
| Lupus ; | Epithelioma. |
| Lymphadenoma ; | |

The atrophic affections include—

| | |
|------------------|-------------------|
| Dermatoxerasia ; | Striæ atrophicæ ; |
| Ichthyosis ; | Morphœa ; and |
| Sauriosis ; | Scleriasis. |

The hypertrophic affections are—

| | |
|-----------|---------------|
| Spilus ; | Angeoma ; |
| Verruca ; | Neuroma ; and |
| Cornua ; | Fibroma. |
| Clavus ; | |

Whilst among the fibromata will be found—

| |
|--------------------------------------|
| Spargosis, or elephantiasis Arabum ; |
| Molluscum ; and |
| Cheloma. |

And the diseases of innervation, or neuropathic affections, embrace—

| | |
|-------------------------|---------------------|
| Pruritus ; | Dermatalgia ; |
| Prurigo ; | Hyperæsthesia ; and |
| Neurotic excoriations ; | Anæsthesia. |

A special purpose of these Lectures is to afford the opportunity of comparing the description of the disease with the object itself as preserved in the Hunterian Museum ; to challenge inquiry ; and to confirm or refute theory and preconceived conviction by an appeal to facts.

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LECTURES ON DERMATOLOGY

SESSION 1874.

LECTURES ON DERMATOLOGY.

MR. PRESIDENT AND GENTLEMEN,

It is my object in these Lectures to treat of the integument as a simple element of our corporeal organization, of known structure and functions and liable to pathological changes identical with those of the rest of the organs of the body; that, for example, it may be the subject of *deranged circulation*, constituting inflammation and its processes; of *deranged nutrition*, resulting in aberrations of development of the formative material and of the growth of the skin; and of *deranged innervation*, giving rise to modifications of nerve-function and nerve-power.

These observations apply to the integument when taken as a whole; but anatomy informs us that there are particular parts of the skin which are sufficiently distinct in themselves to deserve separate consideration; for example, the rete mucosum, the cuticle and nails, the hair, and the cutaneous glands,—namely, the sebiparous and sudoriparous.

Inflammation of the integument is modified by the nature of its *cause*, which may be ordinarily constitutional or local; may be due to the presence of a blood-poison, or may be due to dystrophy and associated with aberration of nutrition or with degeneration.

Of the examples of inflammation dependent on *ordinary constitutional causes*, I may cite—eczema; erythema and erysipelas; pemphigus and herpes; and

furunculus with anthrax; and of those dependent on local or traumatic causes, some of the most obvious result from excess of heat and cold, mechanical and chemical irritants; and among the latter may be especially noted scabies, the effects of arnica, the aniline pigments and arsenic.

Inflammation of the integument due to *blood-poisons* is exemplified by the exanthematous fevers, by dermatosyphilis, and true elephantiasis or elephantiasis Græcorum; and inflammation proceeding from or associated with *dystrophic causes* is represented by—lepra Græcorum, struma, lupus, lymphoma, xanthoma, and epithelioma.

Inflammation proceeding from ordinary causes, constitutional and local, and inflammation consequent on blood-poisoning, have already been passed in review in previous lectures; and in the latter of these I considered at much length the first of the dystrophic inflammatory affections, the lepra of the Greeks. The subjects, therefore, at present before us, and to be submitted to your investigation in the ensuing course of lectures, are—scrofula, lupus, lymphoma, xanthoma, and epithelioma.

Before, however, I enter upon these topics, I shall proceed, according to previous custom, to place before you the models, illustrating the past lectures, which have been added to the dermatological collection since the completion of the former course; the general purport of these lectures being to found our opinion of cutaneous diseases on the examples which are brought directly under our observation, and are to be found in the dermatological collection.

LICHEN PLANUS.—No 97 is a model of the inner side of the leg, representing *lichen planus* in its retrograde and pigmentary stage. The eruption is composed of flattened papulæ and slightly prominent blotches, ranging in diameter between two lines and nearly two inches, the larger blotches being formed

by an aggregation of papulæ united by an erythematous and pigmented base. The blotches are irregular in figure, but evidently composed of the small circular flattened papulæ, some of which are seen to project here and there from their border. The colour of the eruption is reddish-brown, from pigmentary deposition; the cuticle covering them is thickened, in some corrugated, in others roughened by desquamation, while an abrasion of a few of the papular eminences affords evidence of the operation of the nails for the relief of itching. The present stage of the eruption is usually very pruritic.

Comparing this model with Nos. 95 and 96, the resemblance is only appreciable in the instance of the latter; the pigment is met with in both, and the tint of the pigment is further illustrated by the drawing, No. 94. The original pathognomonic flattened and umbilicated papulæ are nowhere discoverable in model 97, and the prominent feature of the eruption is its evident chronic character.

Lichen planus is not as yet recognized by our colleagues of St. Louis, and therefore we are not surprised at finding different names assigned to different specimens of the affection, particularly by different observers. No. 95, for example, is called by Lailier, from the presence of desquamation in small flakes "pityriasis rubra"; No. 96 is named by Hillairet, from the large size of the papulæ, "lichen hypertrophique"; while the present case (No. 257 in the Paris collection) is termed by Besnier, "lichen lividus." But with regard to the latter appellation, it will be perceived that the colour is not due to a purple or livid change in the hue of the blood, but to the actual accumulation of pigment, which is not livid but simply brown, in the rete mucosum.

The microscopic examinations of lichen planus by Hebra, Neumann, and Tilbury Fox have proved the existence of those anatomical characters which

might have been predicted as the probable consequences of the chronic inflammation of a follicle; namely, hypertrophy of the epidermis and epithelium; hypertrophy of the rete mucosum with augmentation of pigment; hypertrophy of the papillæ cutis; together with hypertrophy of the connective tissue of the corium, its muscular structure and its blood-vessels. Neumann remarks that he has repeatedly found hypertrophy of the muscles of the skin in association with its chronic diseases: for example, in eczema, ichthyosis, and elephantiasis Arabum. The accumulation of epithelium within the follicles has been especially noticed by Hebra, who compares it to a funnel composed of a series of hollow cones, expanding towards the surface. The same appearance is met with in the sweat-tubes, and manifestly so when the eruption attacks the palm of the hands. But Neumann has further drawn attention to a remarkable hypertrophy of the root-sheath of the hair at the base of the follicle, where the accumulation of epithelial cells is so considerable as to distend the limitary membrane, and cause protrusions from its surface, suggesting the appearance of an acinous gland. Possibly, a similar pathological structure would be found in the mucous follicles of the mouth and tongue, in which situation I have likewise found these papulæ.

The pigmentary stains, so characteristic of the retrogressive stage of lichen planus, no doubt result from the escape of hæmaglobin from the congested vessels of the follicle, and its conversion into hæmatoidin pigment by the cells of the rete mucosum. It is to the deep penetration of the inflammatory congestion and its chronic character in this affection that we must attribute the difficulty of its cure; an experience which attaches not to it alone but to most of the diseases of the follicles of the skin.

ERYTHEMA PAPULOSUM.—No. 109 is a model of the

back of the hand with part of the forearm, exhibiting a cluster of blotches and papulæ of erythema papulosum. The papulæ range in size between one and two lines; and the blotches, which are circular in figure, present a diameter of something less than half an inch to an inch and a quarter. It is obvious that the circular blotches are the consequence of centrifugal growth of the papulæ: the area of the blotch subsides and becomes pale, while the marginal border is prominent and papulated, evidently constituted of a circle of papulæ in close juxtaposition and more or less completely blended together. Here and there the outline of the larger rings is irregular, from proliferation of the marginal papules; and the greater number of the rings are remarkable for retaining the central papule, which resembles the boss in the centre of a shield. Some of these latter bear a close family likeness to the form of eruption known as erythema iris, and a similar form is met with among the syphilitic papular eruptions.

Erythema papulosum is a frequent concomitant of gastric irritation, has usually, as in the present instance, a dull crimson hue, and has a tendency to disperse by the circumference; the peripheral border usually retaining the breadth and height of the original papule. While in progress of dispersion the area within the circle gradually subsides to the level of the surrounding skin, is at first pale and then yellowish or tawny, and sometimes purplish. The ring itself follows next, and the disturbance of nutrition of the skin has probably been so trifling that the eruption disappears entirely without desquamation of the cuticle.

The term erythema papulosum is founded, according to the axiom of Willan, on the appearance of the eruption at its acme, namely, an outbreak of papulæ; but Lailler, who treated the case, has selected the period of retrogression for giving it a name, and has

called it "erythema marginatum." The model is numbered 245 in the Paris collection.

URTICARIA.—No. 128.—Model of the left thigh, its anterior aspect, showing an eruption of erythematous urticaria. The integument is nodulated by slightly prominent tuberos and flattened wheals of about half an inch in diameter, of a dull crimson colour, and spotted with puncta and slightly prominent papulæ of a deeper tint than the base. Many of the tuberos masses or plates have been left uncoloured by the artist, otherwise the whole surface would be seen to be thickly studded with them, while the intervals between these masses present a thick crop of minute papules resembling those of cutis anserina.

M. Lailier informs us that the patient was a man aged 27, who had been for three weeks the subject of gonorrhœa, and had taken for its cure a multitude of drugs given him by a chemist, but *no copaiba*. The eruption appeared on the evening of the 9th of April, and rapidly overspread the whole body, being most strongly developed on the trunk, buttocks, and face. Its colour was a bright red, and the pruritus very severe, destroying his sleep, and most annoying of all upon the prepuce. On the morning of the 11th he experienced some uneasiness of the throat in swallowing; on this day, however, the centre of the wheals was pale, while the border presented a slightly crimson hue. On the 12th there was a general subsidence of the eruption; it was lighter in hue, and began to resemble erythema circinatum. On the 13th and 14th the retrogression of the eruption continued, it had a fawn-coloured tint, and quickly disappeared, a very little pruritus recurring on the night of the last-named date. On the 15th he was considered well.

By some error, this model, which is numbered 243 in the Paris collection, is termed "érythème papuleux copahique," which is clearly a mistake, as in

physical characters and in medical history the case is evidently one of urticaria, and M. Lailler, in the notes transmitted with the model, expressly states that no copaiba was taken by the patient. Moreover, a reference to model 122 will show that the copaiba eruption is widely different from the one under examination.

PEMPHIGUS GANGRÆNOSUS.—No. 141 is a model of the inner side of the leg, showing two gangrenous blotches, and a pigmentary stain marking the healing of a blotch doubtless of a similar kind. The disease is termed by Vidal “*pemphigus escharotique*,” and probably represents a form of the *pemphigus gangrænosus* of English writers. The gangrenous sores are oblong in figure, the largest three inches in length. The affected integument is tumid and inflamed, the sphacelus superficial, and the necrosed layer of a dark brown colour, approaching to black. At the edge is a narrow fossa separating it from the living skin, and the groove of separation is red and moist. The border of skin immediately adjoining the ulceration is pale, as though from opacity of the cuticle; and beyond the pale border is a blush of redness, which diffuses itself in the surrounding skin. There are no remnants of the bulla of cuticle which must be supposed to have preceded the excoriation; but a bulla is known to be the ordinary manner of development of a similar pathological formation. Examples of the bulla of pemphigus are exhibited in the models and casts numbered 133, 134, 138, 139, and 140.

This model draws our attention to the well-known asthenic character of pemphigus, its proneness in some instances to superficial ulceration, or, as in the present case, to gangrene; and its tendency to pigmentation from decomposition and metamorphosis of effused blood. It is numbered 263 in the Paris collection.

PAPULAR SYPHILIS.—No. 196 is a model of the side of the trunk, showing a prominent form of cutaneous syphilis, consisting of papulæ and circular disks; the latter resulting from the peripheral growth of the papulæ. The discoid eruption is distributed around the waist, spreading out upon the abdomen in front, and the hip behind; while a faint tracery of closely-packed rings may be discovered, on close inspection, occupying the whole surface of the upper part of the model. Some isolated papulæ in the midst of the disks present the typical character of the eruption, and several small clusters of similar papulæ form a connecting link with the disks themselves. The latter are of a dull, brownish-red or copper colour; they have an average size of half an inch; some, resulting from the coalescence of the smaller patches, exceeding an inch in diameter.

In the circular disks, situated on the abdomen, there is a central papule or boss, while the prominent margin is papulated. The area presents a brown tint, resulting from pigmentation, the papulæ being of a deep red, and the latter are surmounted with a small scale, consisting of desiccated epithelial and sebaceous matter. Some of these abdominal disks offer an excellent illustration of the characteristic “copper colour” so commonly met with in syphilitic eruptions, and it will also be observed that there are lighter and deeper hues of this “copper colour”; the former subsiding to a tawny or dead leaf-like tint. It is also manifest, from an examination of this model, that the “copper colour” is due to the combination of a brown pigmentary tint with the dull, purplish red of the blood in a state of languid circulation, when it has already begun to assume a venous hue.

Around the waist, where the pressure of garments modifies the pathological manifestations of the skin, the disks have a more solid and more fully-de-

veloped character; they are more raised, the central papule is lost, and the margin is broader and more even; and although evidently formed by the fusion of papules, the papules are of larger dimensions than those of the simply papulated disks. The mode of fusion of disks by their borders, and the opening up of an irregularly-figured area, is also well shown by the large blotch on the side of the waist, and the approach to a similar fusion by a cluster at the back.

This model is particularly instructive as illustrating the manner of development of syphilitic eruption on the skin. Above, on the side of the thorax, the eruption is *erythematous*, a network of circular and oval rings, each about half an inch in diameter, so faint as to be hardly appreciable in colour and prominence and best observed in an oblique light. Such a form of eruption is usually denominated roseola: for example, roseola annulata (*vide* Nos. 166, 233, 234); and Guibout, under whose care the patient was treated, names it "roséole annulaire tardive," *late* roseola annulata; otherwise, roseola annulata *late* in its development. We also perceive that if this eruption were more active it might rise to the elevation of a papule, and then enter the category of prominent or papular dermatosyphilis.

In the lower part of the model the eruption is papular, and presents three degrees of development; namely, discrete papules; discrete papules in rings converted into disks by an inflamed base; and solid disks with a depressed area and prominent margin. In this latter portion may also be noted the presence of small cap-like scales on the summits of the papules, and cuticular desquamation of the compound blotch in the centre of the model.

The full designation given to the case by Guibout is "*roséole annulaire tardive, et plaques syphilitiques de la peau avec sécrétion cornée.*" It is numbered 249 in the Paris collection.

PAPULAR SYPHILIS, WITH ABNORMAL PIGMENTATION.—No. 258 is a model of the neck and shoulder, showing brown discoloration of the skin associated with syphilis, the latter in the form of a scattered papulo-vesicular eruption. The case is named by Hardy “*syphilide pigmentaire et syphilide vésiculeuse du cou,*” and is numbered in the Paris collection 264.

There is nothing pathognomonic in the character of the eruption, a few scattered papules, differing only from common lichen by the vesiculation of their summit. On the shoulder is a small corymbose cluster which has been subjected to friction, and the vesicles are consequently encrusted with small scabs of a reddish-brown colour. Vesication of the summits of syphilitic papulæ is a common but by no means a specific occurrence, and is illustrated by the cast 194 and model 199.

The pigmentary element in this case is not general, but restricted to the side of the neck, where it forms a kind of framework to a cluster of circular leucodermic spots, the pigment being deepest in hue immediately adjoining the white spots. Therefore, to connect this pigmentary deposit with syphilis the leucodermic spots must be presumed to be the cicatrices of some foregone eruption, of which there is no evidence; otherwise the case must be regarded as a form of leucoderma and melanoderma, present in a person who is likewise the subject of syphilis.

The diagnosis of syphilis in such a case as this is to be deduced from the medical history of the patient, the appearance of the skin and eruption affording no conclusive evidence.

CONGENITAL SYPHILIS.—No. 274.—Model of the face exhibiting a large rupial crust on the side of the nose, bordered by swelling and redness on the side next the cheek. The case is named by Hillairet “*gomme ulcérée avec destruction des os du nez;*

sypheilis congénitale chez une jeune fille de 14 ans ;” and is numbered 267 in the Paris collection.

The disease represented in this model is in appearance identical with that form of ulcerative sypheilis which is denominated rupia; while the history of the case leans to the presumption that it must have been congenital. The child had eruptions on the head and eyelids in early infancy, and at the fifth week was treated for incrustations within the nose, which were thought to be sypheilitic, and yielded to the remedies employed. At three years and a half old she was attacked with measles and pneumonia, and had an eruption on the face; from these she recovered, and remained in fair health until the age of thirteen, when she was sent to school, and there was seized with frequent bleedings from the nose and sore throat. Then the nose became swollen and was treated with injections; the left side subsided, but the right increased in tumefaction, and a small red tumour appeared on the integument and was taken for an abscess. The supposed abscess on being opened gave exit to blood only, and was converted into an ulcer, which gradually increased in size and became encrusted, until it attained the dimensions and appearance shown in the model; the interval from the bleedings of the nose at school to the date of making the model being about ten months. There was also evidence of necrosis of the bone within the nose and perforation of the septum. All suspicion of contagion was absent; and after a treatment during seven weeks by iodine of potassium and bark, the ulcer was reduced to half its size, and offered a fair prospect of healing, while it was anticipated that the complete closure of the ulcer would be followed by very little deformity.

ELEPHANTIASIS ANÆSTHETICA.—No. 328.—Model of the back of the trunk, with the upper part of

the thighs of a young man 21 years of age, showing several large rings of a dull crimson colour. An oval-shaped blotch on the left loin exhibits the manner of formation of the rings; the blotch is at first slightly elevated, uniform in colour, and papillated; the texture of the morbid skin is coarse from corrugation and papillation; and the epidermis of the prominent points is converted into minute white scales. After a while the centre of the blotch subsides to the level of the adjacent skin, and recovers its normal appearance. Concurrently with this alteration of form, the margin creeps onward into the surrounding integument, and the contrast between the central area and the border becomes more striking. Several rings on the right buttock mark a more advanced stage of growth of the blotches, while the large ring on the left buttock, nearly a foot in longest diameter, exhibits the extent to which the annulation may be carried.

A close examination of this model shows that the follicles of the whole surface are abnormally prominent, exhibiting the state denominated *cutis anserina*, and suggesting that a morbid action is present in the follicles, a tendency in fact to the accumulation of their exuvial contents; next follows the erythematous condition in which both follicles and inter-follicular skin are equally involved; and then desquamation from the summits of the follicles. The whole of the appearances presented by the integument are but modifications of these elementary conditions. In certain situations the follicles are more prominent than in others; in other situations, for example on the borders, there is greater vascularity and infiltration of tissue; and in connection with the hyperæmia is the more active process of squamation and desquamation. There is likewise evidence, in the lower limb of the large circle and in the segment observed on the right thigh, of a process of exhaustion of the morbid action. Instead

of a uniform abruptly circumscribed margin, the peripheral growth of the rings is manifested by little broken clusters and here and there by separate papules.

There is nothing decidedly pathognomonic of elephantiasis in these morbid appearances, the folliculitis and interfollicular erythema, the growth by the border and subsidence within the area, and the bran-like desquamation, are among the commonest features of cutaneous pathology; nevertheless, the appearances here shown are striking characteristics of that disease and particularly of its mode of manifestation on the lower extremities. But we require more information before declaring our diagnosis; and that information is to be found in the history of the case, which calls our attention to a deficiency of sensibility in those parts of the skin over which the disease had travelled.

The patient was born in the Isle Bourbon, where leprosy prevails; his father was a native of the country, married to a French woman, but perfectly free from elephantiasis; the patient himself was weakly and anæmic and two brothers had died of phthisis. It is further noted that he was without beard. At the age of fourteen he was first observed to have blotches on the skin; they were limited to the legs, podex, and arms; the blotch which occupied the left loin being the only one situated on the trunk. The existing rings are consequently the outgrowths and remains of blotches which had made their appearance seven years before.

When he was seventeen the left hand was noticed to have become thin, the little and ring finger had lost their normal sensibility, and were bent from loss of muscular power and contraction of tendons. This had occurred without pain, and the morbid process gradually extended to the rest of the hand. At eighteen an ulcer formed on the cushion of the first metatarso-phalangeal joint in the sole of the foot.

At the age of twenty, atrophy and insensibility took possession of his right hand, preceded by cramps, twitchings, and tingling; and in the following year, an ulcer showed itself on the ball of the first metatarso-phalangeal articulation of the right foot. At this time, the arms were thin and shrunken; the left leg partially insensible at its lower part; and the right foot also deficient in sensibility; some anæsthetic patches being discoverable on the toes.

ELEPHANTIASIS TUBEROSA.—No. 314.—Photograph of a young man born in India, the son of European parents. When he first came under my care, about five years ago, a few pimples only were the evidence of elephantiasis: these were scattered over his face; in other respects he was considered in average health. The photograph represents his appearance in 1873, when he was under the treatment of Dr. Robert Liveing, in the Middlesex Hospital.

No. 315.—A profile view of the same patient; the tuberos condition of his face is more obvious in this position than in the former; as likewise his emaciation.

These illustrations bring very forcibly to our attention a fact of which the student of dermatology will be constantly reminded in his investigation of cutaneous disease; namely, that whatever the cause of the disease, its manifestation by the skin must obey the normal pathology of that organ. Thus, whether we select, for example, the operation of a poison engendered by mal-assimilation; or whether we choose those which give rise to the exanthematous fevers, syphilis, or elephantiasis, the cutaneous phenomena, obeying a like law of normal pathology, must of necessity be similar.

In the instance of the dermatitis occasioned by the poison of mal-assimilation, we are presented with the series of pathological phenomena which constitute eczema; for example, hyperæmia, papu-

lation, exudation, and desquamation. In small-pox there is to be found precisely the same series; and the same also in dermatosyphilis and elephantiasis. In all these cases it is the *causa morbi* which constitutes the essential difference, and it is the *causa morbi* which we are called upon to treat therapeutically. Hence it is that I have called attention to the pathological appearances of the skin in No. 328, which cannot be adopted as representing elephantiasis, until the history of the patient is explained; and then the reality of the disease becomes self-evident.

I am the more induced to dwell on these observations because, in fact, they constitute the whole foundation of *diagnosis* as applied to diseases of the skin, and prove very decidedly that the only true source of identity of these diseases is to be sought for in the pathology of the organ and of the general system taken together; the external pathological appearances being of no scientific or practical value when considered alone.

In elephantiasis, the integument may present an erythema only, as in the instance before us, with more or less implication of the follicles, and that erythema may exhibit the normal phenomena of erythema, namely, a redness which appears and disappears on the same spot, and is therefore called "fixed" or stationary; or a redness which grows by the circumference and fades in the centre, giving rise to rings of various dimensions. Such an erythema may be expected to interfere very considerably with the nutrition of the skin, and in that way develop desquamation, arrest secretion, choke up the follicles by accumulation of epithelial exuviae and cause the fall of the hair; all of which does actually occur.

Then we have papulæ, so small as to be taken for acne; and subsequently growing into tubera of considerable magnitude. And at a later period

ulcers, one while produced by degeneration and softening of the morbid elements of which the tubera are composed, and another while by necrobiosis and gangrene. But none of these symptomatic characters have any diagnostic value unless they be associated with anæsthesia; and even then the medical history of the patient is essential to a satisfactory verdict.

The revelations of the microscope tend still further to mark the similarity in pathological conformation of cutaneous diseases, and the histological resemblances which exist between them, and to refer us for our diagnosis and therapeutical indications to other sources than the physical manifestations of the disease. According to Virchow, the pathological element of elephantiasis differs in no essential respect from that of gummed syphilis, nor indeed from that of lupus and glanders; granulation tissue being the characteristic element of all; the granulation tumour of elephantiasis being, he observes, more permanent than others of the same class, and tending in a less degree to degeneration and softening.

The morbid anatomy of elephantiasis has received an important addition from the report by Dr. Moxon, of a post-mortem examination of the poor boy whose photograph is numbered 310. In this case, although the nerves presented an exquisite degree of sensitiveness during life, they, as well as the brain and spinal cord, were found healthy, and the nerves, instead of being enlarged, were smaller than natural. The parts principally diseased were the skin and mucous membrane; some portions of the skin, for example, that of neck, trunk, buttocks, perineum, genitals, shoulders and hips escaped, whilst those which were diseased were atrophied and rotten and tore with the greatest ease; the tubercles which were prominent during life were flat and collapsed, and the spines of the crests of the ilium and the

patellæ had broken their way through the skin and become exposed to view. This morbid degeneration of structure penetrated the subcutaneous tissue, and was especially conspicuous in the external coat of the superficial veins, and, in some situations, in the sheaths of the nerves. The superficial veins of the forearms had a knotted appearance, from the development of whitish yellow nodules in their outer coat, and from some of these nodules pus could be squeezed. In intimate structure the nodules were composed of a cellular and finely fibrillar tissue, enclosing cells of large size, and resembling that of lymphatic glands. In the lower limbs the skin and subcutaneous tissue were blended together and had undergone a gelatinous change,—a combination of atrophy and œdema durum; whilst, in the midst of this hard, wasted, and œdematous tissue, the veins could be traced as reddish-yellow imperforate bands of similar texture, while the nerves remained unchanged. The muscles were wasted and the bone softened.

The mucous membrane of the fauces, soft palate, nares, and larynx was studded with an abundance of flat, confluent yellowish tubercles. Tubercles were also found in the pleura, and in the lower lobe of the lungs; fine yellow granules and nodules amidst the mesenteric and upper lumbar glands, and a tubercular ulceration in one of Peyer's disks.

The heart was small and healthy, corresponding in this respect with that which is met with in the marasmus of cancer, and implying, Dr. Moxon infers, an absence of morbid alteration of the blood. "We are struck," Dr. Moxon observes, "with the small amount of morbid change proper to elephantiasis. The immediate cause of death was amyloid or lardaceous disease of the alimentary canal, liver, kidneys and spleen, with marasmus in the most extreme degree. The amyloid change occurs in the

same places as in other lingering but not otherwise mortal maladies.'* *

The therapeutical treatment of elephantiasis Græcorum has always presented a gloomy page in the history of medicine; but I have now the gratification of announcing a gleam of light which has streamed through the prevailing darkness, and comes, as indeed we have a right to expect, from one of the great sources of this terrible disease, namely India. Our medical brothers in India have very justly won our deepest respect for their labours. We have, not unreasonably, concluded that the investigation of leprosy was in excellent hands; the pathology of that frightful malady has been carefully elucidated by their exertions; but hitherto, the advances of therapeutical treatment have failed in the development of any satisfactory results. Beau-perthuy in the West, for a moment awakened our hopes; Bhau Daji in the East, startled us with a mysterious pretension; however, we can tender no thanks to either for any real progress made in the therapeutics of elephantiasis up to the present time.

But now, through the generosity of one of the most distinguished and esteemed representatives of the medical profession of India, Sir Ranald Martin, I am enabled to make a statement of facts, so extraordinary and so encouraging, that we are almost led to hesitate in accepting them, from an apprehension that they should prove less true than they seem to be. The facts themselves are founded on a report by Dr. Joseph Dougall, surgeon-major of the Madras medical service, to the surgeon-general. The report is addressed from Fort Blair, in the Andaman Islands, and records the experience of six months, as to the application of gurjun balsam or wood-oil, in the treatment of leprosy.

Dr. Dougall observes, that, having reached that

* Guy's Hospital Reports, 1868, vol. xiv. page 248.

settlement in March, 1873, he shortly afterwards paid a visit to the leper barracks ; and was so deeply impressed with the deplorable condition in which he found the patients that he resolved to give his earnest attention to the duty of relieving their sufferings. One poor fellow, named Gunga Ram, was lying in the corner of a ward, covered up by his blanket, to shield himself from the flies which settled upon him in swarms. He had been in that state for two years, just able to crawl from his corner at meal-times and for the most necessary purposes. The whole of his integument was thickened and studded with tubercles ; there were ulcers on his fingers ; his left leg and foot were swollen and fissured, and his extremities and breast anæsthetic. His voice had the muffled sound of the advanced stage of the disease, and his breathing was thick and loud.

Another patient, by name Senevassa, moved from place to place on his hands and hips, being prevented from walking by large ulcers on the soles of his feet.

A third, Ram Roy, with ulcers on his fingers and toes, as also on the soles of the feet, could only move by hobbling on his heels.

And a fourth, Bulwa Gwala, had lost four fingers from the right hand, and two toes from the right foot ; the ulcers remaining open and increasing in extent.

The whole number of the patients then under treatment was twenty-four, and all exhibited that blank, hopeless look, which conveyed to the mind of the spectator the idea of a living death.

To carry out his intention of providing some possible mode of relief for these poor people, Dr. Dougall turned over in his mind the application of the Beupertuy method ; but found it impracticable on account of the liberal scale of diet it required, the difficulty of obtaining the necessary remedies,

and the generally complicated character of the process; and came to the conclusion that he would make trial of an oleo-resinous substance, the gurjun balsam or wood-oil, obtainable in great abundance in that part of India, and at a very trifling expense. He declares that he was not led to make the experiment from any preconceived theory or even knowledge of the balsam, beyond that of its use in gonorrhœa, but by the mere necessity of finding a remedy suitable for the skin, and presenting facilities of application. The remedy heretofore in use was carbolized oil, which had proved itself to be utterly inefficacious, and was incompetent even to prevent the flies from settling on the wounds.

Accordingly, on the 23rd day of May, he made his first essay by causing the patients to be thoroughly rubbed with an ointment composed of one part of gurjun balsam to eight parts of cocoa-nut oil. Three weeks later he increased the strength of the ointment to one part in five; and in September had hit upon what he designates as a beautiful preparation for external use, consisting of one part of the balsam to three of lime-water; and for internal use, a combination of equal parts of the balsam and lime-water. Rubbed upon his own arm, he found the new ointment perfectly smooth, not unpleasant in odour, unirritating, and neither creating redness nor pain. When taken internally, it is not disagreeable to the palate; and in drachm doses, taken twice a day, improves appetite and acts as a mild laxative; in two-drachm doses, also taken twice a day, it produced several large and healthy motions, and acted as a powerful purgative and diuretic.

His method of treatment was conducted in the following manner:—The patients rose at half-past five in the morning, procured a small quantity of dry earth, and then went to a neighbouring stream, where they washed themselves thoroughly, using

the dry earth in lieu of soap. They returned to the leper ward at seven, and seating themselves in a row, were made to swallow half an ounce of the emulsion, composed of equal parts of gurjun balsam and lime-water. They were then supplied with the gurjun ointment, and rubbed themselves thoroughly with it all over the body, keeping up the friction for two hours. The rubbing being over at nine, they betook themselves to breakfast; and after breakfast, when they had become sufficiently strengthened by the process, they were occupied in trimming the ground around their quarters and excavating earth-works. "It is pleasing," writes Dr. Dougall, "to see the will with which men, who for years had not been able to handle a walking-stick on account of loss of fingers and numbness in the arms, now set about this sort of work; and they are evidently proud of being again able to work, when such a hope had been abandoned long ago."

At three in the afternoon the patients again "fall in," and receive their second half-ounce of the gurjun emulsion and their supply of the ointment, and set to with energetic friction for another two hours. The prolonged rubbing is insisted on, not only for the sake of a more enduring action of the remedy, but likewise as a gentle employment and exercise, conducive, both physically and mentally, to the improvement of the health of the body.

The diet of the patients was of the most meagre description, and insufficient, Dr. Dougall believes, for their wants; but, nevertheless, the improvement in their condition proceeded in spite of this drawback, and no change of diet was made during the six months' experiment. As an instance of the poorness of their allowance, the most ample of the daily rations consisted of twenty-four ounces of rice; four ounces of pease flour; one ounce of butter; one ounce of salt; half an ounce of curry; half an ounce of tamarinds, and five ounces of

vegetables. Four times a week, each man was supplied with five ounces of fish; and twice a week with six ounces of clotted milk; the money value of the diet of a man for a month being not more than seven shillings and ninepence.

Having commenced his treatment in May, Dr. Dougall was speedily rewarded with the prospect of success. "In the beginning of July it became apparent that the lepers were improving in appearance and gaining in flesh, and the sores were beginning to heal." It was then that he was impressed with the importance of making a photographic record of their progress: it is true that the cases could not be shown at their worst, but, dating from the beginning of July, the improvement which took place subsequently to that period is shown in the forty-four photographs at present before us.

With respect to the improvement resulting from Dr. Dougall's treatment; it must be acknowledged that its success is very extraordinary; and, although no instance of cure can yet be reported, it ought to be remembered that the disease is reputed to be wholly incurable, and the duration of the experiment was only six months; while the greater part of the patients had been suffering under the malady for several years, and were residing in a place where the disease is endemic.

"The first notable improvement," says Dr. Dougall, "was in relation to the leprous ulcers, which began to heal, and at the same time the anæsthesia gradually diminished." And when the six months' trial was completed, he further remarks that "of the twenty-four cases under treatment every one has decidedly benefitted; every ulcer without exception has healed up and not broken out again; but the most marked benefit has been derived by those suffering from the anæsthetic form of the disease."

No. 1 was numb in both upper and lower extremi-

ties, and now sensation is restored to these parts, with the exception of the left foot.

No. 2, who was quite numb over the front of the chest, both arms and both legs, can now feel a prick with the point of a pencil.

In No. 3 the numbness affected both arms, both legs, and both ears, and at present is quite gone. This man had been unable to do more than crawl for two years, and now he can run at good speed, and handle a pickaxe like a navy.

No. 11 has been seven years a leper, had anæsthesia of the right forearm and both feet, the whole of the fingers of the right hand had been eaten away, and portions of two of the toes of the right foot; and the stumps were open sores on the 23rd of May, when he used the wood-oil for the first time. He has perfectly recovered sensation in all the parts, and his toes have been healed for the last three months.

No. 13 was anæsthetic in both arms and both legs; no trace of numbness now remains, and the tubercles have almost entirely disappeared; in fact, it requires close inspection to detect the remains of the disease. Numbness of both hands was so complete that without the aid of his eyes he could not hold a walking-stick, and his fingers were so swollen that he was unable to bend them. Now, however, he is an able and a willing worker, uses a heavy axe to chop firewood with the utmost freedom, and is anxious for permission to return to work.

No. 14 had loss of sensation and paralysis of the left leg; the sensation has almost entirely returned, but motion is as impaired as ever. He was unable to walk in consequence of ulceration of the heel and outer side of the right foot; now the ulceration is cured, and he walks quite well, with the exception of a slight limp due to the paralysis. The man is aged, and had been bedridden for five years and a half, and is now so much delighted with his restored

power that he is never at rest, always cleaning the compound, pulling weeds, trimming the walks, and showing his usefulness in many ways.

Case No. 24 was under treatment only three months, but at the end of that period the hypertrophied skin of the face and forehead has resumed its natural appearance; the tubercles on the right and left arm, back and buttock, have subsided. The swelling of the fingers and feet has disappeared, and the ulcers on these parts have all healed, and the anæsthesia of both forearms and both feet has entirely gone.

Case 25 was also under treatment for three months only, and the disease of recent development. The ulcers have all healed up, and in other respects he is quite well.

The change the tubercles undergo in the process of reduction is worthy of notice. After a certain lapse of time, the tubercle seems to become more movable and loose at the base, and is felt to be softer than at the apex. This softening process gradually approaches the surface, and then a watery bleb forms, the bleb bursts and allows the escape of a thin, clear, serous fluid, and the tubercle diminishes in size. This process is repeated two or three times, and then the tubercle disappears altogether. Dr. Dougall found the dispersion of the tubercle accelerated by puncturing the bleb with a lancet, which allowed the fluid to escape without pain or inconvenience to the patient, and without interference with the rubbing process. He notes that he has seen a tubercle on the helix of the ear entirely subside after one formation of the vesicle.

The gurjun balsam, or wood-oil, is not altogether unknown to British medicine; thirty-six years ago, namely in 1838, Sir William O'Shaughnessy mentioned it as a valuable substitute for copaiba in the treatment of gonorrhœa; and its merits in that disease and gleet have been subsequently tested,

with favourable results, by Dr. Waring, in 1852; Dr. Montgomery, in 1862; Dr. Henderson, of Glasgow, in 1865; and likewise by Dr. Rean, Mr. Kanny Loll Dey, Mr. Coulson, and Sir Ranald Martin. Dr. Henderson administered it in doses of a teaspoonful twice or thrice a day, without unpleasant symptoms. Dr. Montgomery met with a case in which it gave rise to an eruption on the skin similar to that produced by copaiba, and Mr. Kanny Loll Dey, while he found it more efficacious than copaiba in gleet, also speaks of it as a stimulant application to indolent ulcers.

Its physical and chemical properties have been made the subject of several articles in the "Pharmaceutical Journal and Transactions" during the years 1854 to 1857. Mr. Charles Lowe describes a sample given to him by Mr. Crace Calvert, under the title of a "new variety of balsam of copaiba"; Mr. Daniel Hanbury follows next with an article "on wood-oil, a substitute for copaiba"; and then succeed notes on "wood-oil" by M. Guibourt, of Paris; and Dr. De Vry, of Rotterdam. Mr. Lowe directs his attention chiefly to the analogies subsisting between wood-oil and copaiba, and suggests that as it contains more hard resin, which he terms capivic acid, it may, therefore, be considered to be of superior value as a medicament." Mr. Hanbury's, M. Guibourt's, and Dr. De Vry's observations tend, however, in the opposite direction, to establish the differences between the two oleo-resins; one of the most conspicuous distinctions being that pointed out by Mr. Lowe himself; namely, that when heated to a temperature of 230° in a corked vial, the gurjun balsam is converted into a jelly, which will not pour out when the bottle is turned upside down. And this curious property is more strongly marked, as Mr. Hanbury remarks, if the temperature be raised to 266° ; whereas copaiba evinces no such phenomenon.

The analogous medicinal properties of gurjun

balsam and copaiba must be referred to the fact of both substances being oleo-resins, and possessing a similar odour. But they differ in colour and transparency, and are derived from trees of a different botanical order. Copaiba flows naturally from incisions made in the bark of a tree growing in South America; whereas the gurjun requires the double process of incision and heat by fire to promote exudation, and is procured from the *Dipterocarpeæ*, gigantic trees which are found in the countries east of Bengal; one of these huge trees yielding as much as forty gallons of the balsam in a single season. Indeed, its abundance is so considerable that in Eastern India and the Malay Islands it is used in lieu of paint for coating over ships and houses.

As there are several species of the *Dipterocarpus*, some of which are more productive in quantity of balsam than others, it is not at all improbable that there may be differences of quality in the product. Dr. Dougall informs us that one part of the balsam mixed with three of lime-water produces an ointment; and that equal parts of lime-water and balsam form an emulsion fitted for internal use. But Messrs. Bell, of Oxford-street, who have assisted me in my experiments, find that, with one sample of wood-oil the lime-water separates from the balsam in the former proportions; and produces a thick tenacious liniment, fit for external use, but utterly unfit for internal administration, in the latter. While, with another sample, the two substances combine nicely in both proportions. These differences may be in some measure due to the age of one of the specimens, which was obtained from Allen and Hanbury; and is probably a part of their stock remaining over from 1858, and therefore nineteen years old.

Pharmaceutically, the gurjun balsam and that of copaiba are very different, the latter being much more amenable to processes requisite for its exhi-

bition internally. The gurjun will neither form a satisfactory emulsion with mucilage, nor a pill with magnesia. Under these circumstances it has appeared to me that the best mode of administering it will be by capsules, the dose ranging from one to four drachms daily; while the liniment of equal parts of the balsam and lime-water can hardly be improved for external use. Bearing in mind Dr. Dougall's hint as to the difficulty of removing the balsam by means of soap, I have employed Fuller's-earth powder for that purpose very successfully.

Mr. Kanny Loll Dey's brief remark that the gurjun balsam is suitable for indolent ulcers, as a mild stimulant, would seem to point out that the balsam was already known in India as an external remedy, and some inkling of a rumour of this kind may have suggested to Dr. Dougall the novel use to which he has applied it; and we are led to infer that if, as has been proved, it is so useful in the tubercular thickenings and cachectic ulcerations of leprosy, it may likewise be efficient in some of those inveterate forms of cutaneous disease of which we have so many examples amongst ourselves. I have accordingly made trial of it in chronic eczema, in lupus vulgaris, in lupus erythematosus, and lepra Græcorum, and believe it to be deserving of a careful and extensive trial. I have also prescribed it in elephantiasis tuberosa and in the incipient and neuralgic stage of elephantiasis anæsthetica. Of the results, the experiments are too recent to admit of a judgment, but I have already recognized in the remedy several important properties: in the first place, it is bland and unirritating; and, in the second, it supplies a requirement of the utmost importance in the treatment of cutaneous diseases, namely, a pliable, varnish-like sheath to the morbid skin, preserving its moisture, excluding the atmosphere, and not so liable to accidental removal as our usual applications,—a fourth therapeutical power,

in fact,—neither water, powder, nor grease, but possessing in a modified degree the combined properties of all of those agents. In a case of chronic eczema of the groins, attended with the most distressing neuralgia, with a morbidly sensitive state of the tumid and congested skin, to which every form of local remedy had proved irritating and almost unbearable, I applied the gurjun liniment, with the effect of soothing the morbid skin in the most satisfactory manner, and the patient, when asked to express the sensations resulting from its use, observed that it gave the sensation of a cool, smooth satin brought in contact with the skin. I have likewise found it a valuable remedy in chronic lupus.

LEPRA GRÆCORUM.—No. 347 is a model of the back showing *lepra vulgaris*. The case is chiefly remarkable for the unusual thickness of its scales. In other respects it is a fair illustration of the retrograde period of the disease. Nearly all the circular patches are converted into rings, many of the rings have coalesced, forming extensive map-like figures, and in these coalescing blotches segments of the rings have disappeared so as to give rise to curious convoluted figures, such as those which have suggested the term “gyrata.” Hence, in consideration of the annulate or circinate forms and the more eccentric convoluted figures, Guibout names the case “psoriasis gyrata et circinata.” Examples of these “gyrated” figures are seen both in the upper and lower part of the model, and likewise at the side. A few tubercular masses at the upper part, as well as some within the boundary of the compound blotch, and three on the right side of the loin, might be taken as showing the character of *lepra guttata*; and in this way all the principal forms of *lepra* may be said to be illustrated in the single model; namely—*Lepra guttata*, *orbicularis*, *circinata*, and *gyrata*. It is numbered 242 in the Paris collection.

No. 331 is a specimen of the kind of scales which are commonly exfoliated from the skin in common lepra Græcorum ; these were collected from the bed of a patient on rising in the morning, and represent the average produce of two nights.

In discussing the natural history of lepra in my former course of lectures I endeavoured to prove that as an inflammation, the inflammatory congestion of lepra must be regarded as presenting a subacute and chronic type. In general, the hyperæmia is but little calculated to attract attention, the chief feature of the disease is a dystrophic phenomenon manifested by an excessive accumulation of epidermis, such epidermis being abnormal in its structure ; or the disease might be defined to be a low inflammation with a degradation or degeneration of structure. General laws are often very forcibly illustrated by their exceptions, hence the eruption of lepra sometimes becomes the seat of an intense erythema and sometimes of an inflammation which assumes the eczematous type.

I further endeavoured to illustrate the dystrophic nature of lepra by tracing it back to its source, at all times one of low nutritive power, in many cases discovering a phthisical stock, and in others a cancerous stock, as its "fons et origo."

From lepra, with the characteristics already mentioned as a starting point, a step forwards or rather downwards will lead us to the morbid phenomena evinced by struma, and a further downward step to those manifested by epithelioma.

SCROFULA or STRUMA is a state of the animal constitution in which the vital power is essentially feeble, and in which the trophic or nutritive functions are especially liable to derangement and deterioration. Hence, the strumous state is most commonly found in ill-nourished persons, whether such defect of

nutrition be hereditary or accidental. Its tendency to be manifested by swelling of the lymphatic glands, suggested to the minds of the Latins the word *scrofula*, the choirades of the Greeks: and the thickening and condensation of the subcutaneous tissues the synonymously employed term *struma*.

In the dermatological collection we have a number of specimens illustrating scrofula, or rather struma of the integument, and the general character of these affections is as follows: *first*, vascular congestion or low inflammation of the integument, manifested by a dull crimson or purplish or leaden colour of the skin; *secondly*, thickening and infiltration of the inflamed skin, proceeding onwards very slowly to softening and the production of a cutaneous abscess; *thirdly*, progressive thinning of the skin which eventually bursts and gives exit to a mixture of pus, sanies, ichor, and broken-down tissue, the latter often presenting the appearance of what has been termed caseous substance; and *fourthly*, a slow reparative process, resulting in the formation of cicatrices of white fibrous tissue, the latter being often in excess, and constituting an hypertrophy; sometimes also there is an hypertrophy of the papillary layer of the cutis and sometimes of the epidermic tissue. When these characters are present in the skin in association with hypertrophy of glands we cannot hesitate to pronounce the case scrofula, and we are equally warranted in my opinion in applying that term when they are well defined, even where the glands may have escaped disease.

The natural tendency of scrofulous inflammation of the skin is to ulcerate. Sometimes the ulcerative action extends in depth, following the course of the strands of fibres of the subcutaneous cellular tissue, and so giving rise to sinuses. At other times it remains quite superficial, slowly attacking the immediately contiguous sound skin; running through the same stages of thickening, softening, suppuration

and ulceration, and so producing a superficial ser-piginous ulcer which continues to creep on by the circumference while the centre is gradually converted into a thin fibrous cicatrix. We have here a creeping thing in the form of an ulcerous circle, to which the ancients gave the name *erypes*, and to one of its varieties the well-known term, herpes esthiomenos, creeping or eating ulcer. These scrofulous ser-piginous ulcers always present a prominent border, where the ulcerative process is slowly progressing; sometimes the pus excreted by the ulcerating points dries on the surface and gives rise to thick, dark, greenish-looking or black crusts. Often on the removal of these crusts the tissue beneath is found granulated and papillated, and the disturbance of the crusts tears the hypertrophied granulations and papillæ, and occasions bleeding. At other times, the ulcers have healed, and a thick epidermic crust is formed in lieu of the exudation crust, and the removal of the epidermic crust is equally attended with rupture of the exuberant granulations and bleeding.

When the ulcerative process is confined to a small extent of surface, as to the back of the hand, the ulcers are frequently small and deep, communicating with each other by means of sinuses; the integument is as it were undermined, and the appearance of the disease is suggestive of the term eroded, or "worm-eaten," sometimes applied to this form of ulcer. Moreover, the outer border of these wormeaten-looking patches is usually thickened, but frequently more or less extensively undermined.

In observing a succession of scrofulous ulcerations, we are imperceptibly led on from the most recent forms of the disease, the abscess with its clumsy reparative process, to more chronic forms, in which we find suggested the terms lupiform and lupus, and we have the conclusion forced upon our attention, that lupus is simply a scrofulous inflammation of the

skin, of a more confirmed character than the more recent affection to which we are content to use the word scrofula or struma. This, in fact, is the view of scrofula and lupus which the study of these diseases has led me to adopt, and which seems to me to be confirmed by the specimens in our collection.

No. 362 is a plaster cast, exhibiting dermatostruma or dermato-scrofula of the face. The abscesses and ulcerations are healed, but the surface is roughened by uneven, puckered, and prominent cicatrices. Two of these cicatrices are seen on the cheek, and one ridge-like in figure beneath the chin. It may also be noted in connection with this case that the accumulation of white fibrous tissue in the form of prominent ridges is a representation of that cutaneous deformity which has received the name of "false cheloid."

Nos. 363 and 364 are coloured photographs of the shoulders and arms of a young woman affected with dermatostruma in the form of serpiginous blotches, which have travelled over a large extent of surface. The areas of the blotches are cicatriciform, marking the effects of superficial ulceration, and are covered with small white scales resembling those of lepra, and the prominent border is encrusted with thick epidermic concretions.

No. 365 is a small collection of the epidermic crusts from the arms of this patient, to show their solid character; even when quite fresh they were as hard and dense as horn.

The patient in this case has been for nearly ten years under my observation, and the disease has persisted from childhood. On the nose she has a well-defined tubercular patch of lupus non exedens, and two or three patches of a similar nature on the scalp.

Nos. 366, 367, and 368 are casts in wax and plaster of the back of the hands of a young girl of 16, showing serpiginous dermatostruma. The

area of the rings is thin and cicatriciform; the border prominent, in one part covered with a thick black exudative crust which conceals an ulcer, in another part, as on the knuckles, considerably thickened and roughened by papillary hypertrophy.

No. 369 is a model of the right hand, showing *dermatostruma* affecting the knuckles of the metacarpophalangeal articulations. There is a circumscribed cicatrix on the back of the hand and a healed perforation of the ring-finger, through which a portion of bone has been expelled. The edges of the principal patch are inflamed and prominent, and coated with thin scales, while the integument of the cicatrices is attenuated and semitransparent. In this case it is obvious that the strumous dyscrasia was not restricted to the cutaneous textures, but was likewise present in the integument of the bone, namely the periosteum.

No. 370 is another model of the back of the hand, showing a large cicatricial patch of *dermatostruma* in which morbid action has ceased, and two smaller patches, occupying the knuckles, in which it continues in a chronic and hypertrophic form. In the cicatricial patch the integument is attenuated so as to bring the veins of the dorsum of the hand very plainly into view; it is purplish in hue, and punctated with minute pigmentary spots resembling freckles. The patches on the knuckles are prominent from hypertrophy of tissue, and are surmounted with a nodulated mass of hypertrophous epidermis, suggesting the name assigned to the case by Hardy, namely, "scrofulide verruqueuse." The disease first made its appearance when the patient was 32 years of age, and had existed for three years when the model was completed. Shortly after this period he exhibited advanced symptoms of pulmonary consumption. Here, therefore, is another example of a general strumous cachexia as evinced by tubercular degeneration of the lungs.

No. 361 is a model of the face, showing dermatostroma in an ulcerating and encrusted form. On the cheek is a blotch composed of two disks, blended together at their circumference, and beneath the chin is another similar blotch. The former measures two inches in longest diameter, the latter three-quarters of an inch. The blotches are covered with a crust which is brown and thin, and the inflamed integument at the circumference of the patches is in a state of desquamation. The patient, a woman, was 39 years of age, and the disease is named by Lailier, "scrofulide." The blotch on the cheek had been in existence for upwards of three years; it began as a small tumour, which subsequently became encrusted, a little sanguinolent pus oozed from beneath the edge of the crust from time to time, and the removal of the crust brought into view an ulcerating base. The process was slow and gradual, but during the third year became more rapid, and it was at the close of the latter period that the patch beneath the chin was developed.

In reviewing these cases our attention is drawn to a certain difference in the progress and cure of the affections which they represent, and we are led to the inference that where the disease and consequent dialysis begins in the subcutaneous tissue and glands, and the affection of the corium is secondary, the progress and cure are more rapid than when the derma is primarily attacked. Hence, in the cast No. 362, which bears witness to the ravages of scrofulous abscesses, the cicatrix is sound, and with the exception of deformity, the natural consequence of destruction of tissue, the cure is complete. Whereas in all the other cases where the disease began in the corium as mouldering ulceration is kept up for an indefinite time, and the tendency is manifested of a serpiginous or herpetic propagation of the pathological process.

Scrofulous or strumous inflammation is very

naturally modified by the circumstances of the part constituting the seat of its attack. Hence, when the portion of integument invaded is conspicuous for a superior degree of vascularity and innervation, we must be prepared for such a state of disease as is exhibited in the model 371, which represents dermatostruma or scrofulous inflammation of the matrix and walls of the nail, *strumous onychia*, or as it is termed by Lailler "onyxis." The wall of the nail is much swollen, the nail is partly separated, and a discharge is seen issuing from the groove in which it is implanted. In this case the onychia attacked in succession the left and right thumb, and the left and right ring-finger.

There is also shown in the rest of the nails on this model a tendency to a disease which has been termed *onycho-gryphosis*, and which consists in the lifting up of the free extremity of the nails by the growth beneath them of an excessive quantity of epidermic substance in lieu of normal nail-substance, and the result of this accumulation is to elevate the nails into an oblique position. In the present instance this morbid affection was hereditary, being present also in the father and brothers of the patient, in whom it was associated with a club-shaped figure of the extremities of the fingers. A further example of onycho-gryphosis is seen in Model 52, wherein it is associated with eczema, *eczema onychicum* or *eczema unguium*.

Another situation in which strumous inflammation connected with the integument occurs, is the mouth, and especially the gums. The model No. 372 is an example of this form of the affection; the patient being the same as the one whose face is represented in No. 361. The gums and palate are vividly red, swollen, and studded with minute superficial ulcers. The base of the ulcers is of a greyish-yellow colour, and numerous depressions and hollows on the surface of the mucous membrane are filled with

a muco-purulent secretion. The gums were disposed to bleed on the slightest pressure and the uvula had been destroyed by the ulcerative process.

Lailier very suggestively remarks that with all this evidence of inflammatory and ulcerative disease of the mouth and fauces, the patient had never suffered from soreness or pain. I was myself struck with this absence of suffering in the case of a young woman who was under my treatment for lupus of the nose; she simply complained of bleeding from the gums, when an examination of her mouth discovered a state of disease very similar to that exhibited by the model before us.

The model No. 373 is another example of scrofulous inflammation of the mouth, involving the upper lip, nose, and gums. The swelled upper lip is a not uncommon symptom of scrofula among children and young persons. The gums, likewise swollen, and of a bright red hue, present numerous depressions occasioned by ulceration, the frænum of the lip is gone, and the surface of the gums studded with small hypertrophous masses of redundant granulation. Lailier anticipates the more advanced period of dermatostroma by naming the disease "lupus."

From scrofulous inflammation of the gums, scrofulous inflammation of the tooth-sacs, interfering with the proper development and growth of the teeth, is a natural transition. In No. 394 we have a model which has been designated by Besniers "scrofulide des dents." The affection of the teeth occurs in association with a form of degenerative disorder which we shall hereafter have occasion to study; namely, lupus erythematosus. The gums are seen to be swollen and vividly red, as in the examples previously examined, and the teeth are seriously deformed. The distal half of the crown of the teeth is natural in appearance, while the remaining half is dirty in colour and denuded of

enamel, and an abrupt transverse line of demarcation distinguishes between the two portions. The scrofulous dystrophia had evidently commenced its operations at the age when the crowns of the incisor teeth were perfected in growth, and before the rest of the crown was completed. The front teeth in both jaws are in a similar condition.

Thus, a review of our illustrations of scrofulous disease of the skin brings under our notice the consideration of scrofulous abscesses of the integument; dermatostruma or scrofula of the skin, in its two forms, stationary and serpiginous; scrofulous inflammation of the matrix of the nails constituting onychia; scrofulous inflammation and ulceration of the mucous membrane of the mouth, as also of the gums and of the capsules of the teeth. These, the more recent manifestations of the scrofulous dyscrasia, prepare us for the more concentrated and destructive forms of strumous disease, for that form in particular to which, from its devouring nature, the name "lupus" has been applied; which is not restricted to the integument only, but destroys everything in its way, even to the periosteum and bone; and which has suggested the well-known terms—*lupus vorax*, *lupus exedens*, and *noli me tangere*.

We have in our collection no very terrible example of *lupus exedens*, rendered doubly hideous by exuberant tubercular growth; but the model No. 374 is a fair illustration of its more common characters. The patient was a young woman 24 years of age; the disease presents itself in an encrusted form, *dermatostruma scabida*, or *lupus scabidus*, and is situated on the nose and cheeks. It consists of prominent circumscribed patches, circular and oval in figure, and ranging in size between seven lines and two inches and a half; the patches are composed of large irregularly-shaped granulations, surmounted by a yellowish exudation-

crust of moderate thickness; in some situations the tubercular masses are fissured and ulcerated, in others in course of subsidence, and their base is surrounded by a purplish margin. The disease first showed itself when the patient was 20; it then healed, but returned four years afterwards; it was again cured after several relapses, and at the end of a year of treatment, yielding finally to cod-liver oil, iron, and iodine. Guibout terms the case "impetigo rodens," and Lailier "scrofulide acnéique."

No. 375 is a photograph of the face of a child affected with lupus exedens, and showing the deformity occasioned by the disease. The cheeks are swollen from inflammation, the eyelids on one side closed; and the integument is wrinkled, tuberculated, and at several points in a state of ulceration.

Nos. 376 and 377 are both casts of the face of a girl 13 years of age, showing common strumous lupus, or *lupus exedens*; the cheeks and upper lip are considerably swollen from inflammation; and the nose is flattened from destruction of bones and cartilages. Moreover, a thin brown crust conceals a state of ulceration of the nose and cheek.

The destructive capacity of lupus exedens is more strikingly displayed in the coloured photograph, No. 379, which exhibits a total loss of the nose, and the serious deformity consequent on the demolition of the bones of the nares and ulceration of mucous membrane. Internally, the palate is destroyed, and the mouth, fauces, and nares form one common cavern. The disease first showed itself within the mouth at the critical age of 13; and the appearances presented by the photograph were the results of ten years' progress. The father of the patient died at the early age of 41 from the effects of dissipation.

Our specimens of lupus exedens, or exulcerans, therefore, point out to us the most characteristic and pathognomonic of the symptoms of the disease,

namely, ulceration—ulceration in progress in a low state of organization and constitution of the individual. Inflammation in such a constitution ceases to be reparative, or, if reparation be attempted, the results are monstrous, as in the examples of hypertrophic lupus, or abortive; the natural consequence of the union of a scrofulous constitution with inflammation, or, as it is sometimes called, scrofulous or strumous inflammation, being the disintegration and demolition of the tissues invaded. It would be an error to regard strumous ulceration and lupus as a specific inflammation, inasmuch as the special characters which are present result simply from the state of constitution of the patient.

It not unfrequently happens that, after all the devastation here described, the integument and mucous membrane heal up completely, and the disease may be said to be cured. But the cure, under the most favourable circumstances, must necessarily be attended with considerable deformity of feature. Such an example is presented in the cast, No. 378, which represents the face of an adult lady and the distressing effects of the disease. In cases of this kind, the patient is almost banished from society, and artificial contrivances have to be invented to enable the sufferer to mingle with the family circle. Where the nose has fallen a victim to the disease, it might be convenient to replace it by an artificial organ, and false noses have been manufactured of metal and likewise of india-rubber. There is, however, usually this defect among artificial noses, that they are wanting in conformity with the rest of the features. Under these circumstances it occurred to me that advantage might be taken of the pliability and lightness of gutta-percha to attain the objects we have in view; and, further, to avail ourselves of the known adaptability of plaster of Paris to acquire a family configuration of nose. This I effected by obtaining a plaster mould of the nose of a near rela-

tive, or of a nose similar in proportions to that which had been lost. I then took a piece of sheet gutta-percha, and, after softening it with hot water, pressed it into the mould. On cooling, it was easy to withdraw the gutta-percha, and the impression on its surface was so complete that every follicle of the original could be seen upon the cast. The cast, moreover, was remarkably light, and lent itself easily to further adjustment. In the next place, a cast of the patient's face having been procured, as in this instance, the free edge of the gutta-percha shell was cut to fit the cast; then the slight model was fastened to the frame of a pair of spectacles, and the nose could be removed and replaced at the will of the patient with the utmost facility; and if there remained any ulceration not yet entirely healed up, applications could be made with the greatest ease. One thing only was wanting, and that the painter supplied; namely, colouring the nose of a tint to correspond with that of the rest of the face. The lady from whom this cast was taken was furnished with a nose of the kind I am now describing, and a specimen of the nose was deposited in the museum of the Society of Arts many years ago, and was subsequently shown in the International Exhibition of 1851.

LUPUS NON EXEDENS.—Our next series of specimens, ten in number, bring to our attention a form of disease which, from its destructive habits, is termed "lupus"; but which, from the absence of ulceration, is denominated, subjectively, "non exedens."

No. 380 is a coloured photograph, showing a blotch of lupus non exedens on the middle of the cheek, a common locality of manifestation of the disease. The patient was a young lady 20 years of age, endowed with a sensitive nervous constitution and derived from an unhealthy stock. The

disease made its first appearance at the age of five, showing itself as it commonly does by a slightly prominent smooth and shining spot, resembling a globule of jelly within the skin, and of a yellowish-red hue, sometimes verging on a salmon tint and sometimes on that of amber. At the first view the tubercle seems non-vascular, it is clearly wanting in capillary vessels; but a closer inspection shows several fine red lines, for the most part crossing the transparent area in a straight direction, and which are evidently small veins.

The appearance of the disease at this period is so striking and pathognomonic, as to render it impossible to mistake it for anything else. Thus in a perfectly healthy integument, and in a seemingly healthy child—healthy in everything but vital power, and that deficiency of vital power expressed only by very partial feebleness of structure, itself dependent on almost inappreciable defect of nutritive function—there occurs a single small spot of the bulk of a small pea, transparent and amber-coloured, taking the place of the normal tissue, the corpus papillare of the corium gone, the capillary plexus of the skin likewise gone, and the venules drawn out into straight lines by the distension caused by the increase in bulk of the seemingly gelatinous growth. It presents, probably, one of the best examples that could be selected of a low form of structure taking the place of a higher form, of a first step in the downward course which leads to degeneration; of a perverted nutritive change which we have already passed in review in the cachexia of syphilis and elephantiasis, and which we shall subsequently meet with as we proceed in lymphomatous tumours and epithelioma; and which in internal organs is represented by tubercle, as of the lungs, and adipose degeneration of muscular and other tissues.

It is at first difficult to see any connection between

this small jelly-like globule and the inflammation and breaking-up of tissues in scrofula, or the inflammatory, the vegetative, and the destructive processes of lupus exulcerans or ordinary lupus, and yet common consent has grouped them together; and they may all be considered as obeying that first law of degenerative proclivity, defective nutrition, and defective nutritive power. It may also be observed, that although lupus non exedens can never step back so as to take on the characters of dermatostroma, or lupus exulcerans, yet both the latter affections in a chronic stage may assume the appearances of lupus non exedens, likewise in a chronic stage.

In the case before us the spot, which was no bigger than a split pea at the age of five years, had attained the bulk depicted in the photograph at 20; it had become more fleshy in its character, and was prominent and circumscribed; subsequently, under the stimulation of several attacks of hysterical illness, acting on a sensitive and feeble organization, the disease increased rapidly in dimensions until it covered the whole of the side of the face, from the edge of the lower eyelid to beneath the jaw, and from the ear to the side of the nose and nearly to the middle line of the lips and chin.

Nos. 381 to 385 are a series of illustrations of lupus non exedens as it appeared in a lady 37 years of age. No. 381 is a water-colour drawing, and No. 385 a coloured lithograph of this patient. The disease occupied both sides of the face, but is here represented on the left side only; while No. 382 is a plaster cast of the right side of the face; and No. 384 a mask showing the appearance of the disease on the nose and lips as seen from the front. No. 383 is a cast of the left side of the face, and is to be compared with the drawings.

The disease, in this lady, began at the age of four years, and the illustrations exhibit its progress

at the expiration of thirty-four years. The first thing that strikes us is the chronic nature of the affection, while its other features are well expressed in the drawing; namely, its serpiginous growth, its differentiation into border and area; the prominence of the border, although slight; the tuberos unevenness of the border, representing many centres of growth, and those centres manifesting a separate progression, so as to form a continuous but at the same time an undulating line. Then the peculiar colour of the border, presenting a bright and pale, or salmon-tinted red, unlike the purplish crimson of lupus exedens. Next we are made aware of a smouldering activity in the border, and especially in the tubercular prominences which compose it, by the formation of thin crusts partly exfoliative and partly exudative.

Then turning our attention to the area of the blotch we see before us the evidences of deterioration of the cutaneous tissue. The area is white, in consequence of the destruction of the corpus papillare, which brings the fibrous network of the corpus retiforme of the corium into view; and deeper destruction is shown by the depression of the cicatriciform surface, and especially by the kind of erosion which seems to have occurred along the edges of the alæ and at the tip of the nose. The highly vascular structure of the lips affording an ample nutritive material, still evinces symptoms of activity by the development of tubercular prominences; whereas the less vascular integument of the tip of the nose has yielded up the fight and has fallen into a state of rest; as we also find to be the case in the centres of the area. In the latter situation also, are seen fibrous bands which constitute a coarse network, as in every cicatrix; while a line of tubercular prominences in a state of activity marks that the blotch on the cheek was originally developed from two centres; the posterior centre being probably the most recent.

It must be noted in reference to this case, that although thin crusts are visible on the tubercular prominences observable along the border of the blotch; and although considerable loss of substance is perceivable on the nose, there has been no ulceration, and that the loss of substance is due to absorption. Generally, besides the desquamation of the summits of the tubercular prominences, there is likewise desquamation of thin laminæ of cuticle from the healed portion or cicatrix.

No. 386 is a plaster cast of the nose of a woman, showing the result of the operations of this disease, and the tuberculated character of the affected skin.

No. 387 is another plaster cast illustrating the appearance of the cicatrices left on the skin by lupus non exedens. The cicatrix at the angle of the jaw is a good example of the retiform structure of these permanent marks which are left in the skin.

No. 388 is a cast of a portion of the neck of the same patient, showing a similar conformation of cicatrix; the general appearance of these cicatrices being like that of a burn.

No. 389 is a coloured photograph of a successful cure of this disease; the deformity is not very considerable, but nevertheless the harmony of the features is disturbed. The disease began at the age of 15, at the commissure of the mouth on one side, and gradually crept upwards on the lip to the nose. The disease was several years before it subsided to the extent shown in the photograph, and remained quiescent for several years longer; but on the occurrence of certain causes of sorrow and anxiety, broke out afresh on the cheeks, and also on the lobe of the ears.

This case, like the others we have already examined, must be regarded as an inheritance derived from a weakly stock; both parents of the patient died at the early age of 42.

LUPUS ERYTHEMATOSUS. — If we cast back our thoughts in review of the series of cases which have just engaged our attention, we may discover two features which are deserving of a moment's revision. First, there is the *nutritive debility* which lies at the root of the whole, and entitles itself to be regarded as a cause; and, secondly, there is the *destruction of tissue*, which is the special characteristic of lupus, and which has suggested the name "wolf," as that of a devouring beast. The first of these features made itself evident in lepra, became more decided in scrofula or struma, and more prominent still in lupus; and from hence onwards through a long series of dystrophic, atrophic, and hypertrophic diseases, we shall find it constantly presenting itself as an acting cause, and as a therapeutic object for our attack. The second, the destroying and devouring feature of these affections, has so identified itself with the term lupus, that lupus as a disease almost loses its identity, and there is danger of attributing to it very different forms of disease; diseases, in fact, in which loss of tissue, even without ulceration, is the pathognomonic character. And it is in such words alone that I can introduce to you a dystrophic affection, which is atrophic instead of being ulcerative, and in which the inflammatory element is so trivial that the disease itself has been compared to erythema; in a word, an affection which is at the same time erythematous as to vascularity and lupoid in its consequences, as leading to the destruction of the more highly organized structures of the skin, and the substitution in their place of one of the lowliest of the tissues, namely, the white fibrous tissue.

Some of our eminent colleagues of Paris have celebrated this peculiar form of disease, under the name of "dartre rongeante qui détruit en surface." Bielt and Cazenave describe this superficial rodent

tetter as follows:—"In its rarer forms the disease [lupus] attacks the most superficial stratum of the corium only. It is most commonly seen on the face and cheeks; there are no tubercles and no crusts, but the skin is red; the morbid surface exhibits a state of epidermic exfoliation; the skin is gradually attenuated; it is smooth, shining, and reddened, and subsequently presents the appearance of a cicatrix, such as is seen after a superficial burn; the redness disappears under pressure with the finger; there is no pain, but some tenderness to the touch. A little soreness is also appreciable after violent exercise or the use of stimulant drinks. When the progress of the disease is arrested, the redness disappears, the cuticular desquamation diminishes, but the affected skin continues thin and shining; it is smooth to the finger, and feels as if it had lost its thickness." This account of the affection is very clear and distinct, but fails to notice one of the most striking features of the disease, namely, the atrophy and disorganization of the sebiparous glands and the follicles of the skin.

Our collection includes several admirable examples of this curious complaint:—

No. 390 is a water-colour study of a well-marked and characteristic example of this disease, showing the colour and figure of the blotches, the appearance of the thin, grey epidermic encrustation by which they are covered, and the destruction of hair which attends their invasion of the scalp. The patches have a purplish hue; they are slightly prominent at the border, where the morbid process is active, and depressed in the centre, where the pathological operation approaches exhaustion.

The thin, grey epidermic encrustation is dense and dry and hard, and composed of the epithelial linings of the follicles, as well as of the desquamating epidermis; on its removal the apertures of

the follicles are seen, dilated and choked with epithelial exuviæ, and very frequently the skin has the appearance of a network, of which the meshes are represented by the mouths of the dilated follicles; there is never any exudatory secretion, and when the encrusted layer is removed the affected skin looks parched and dry. The depression of the centre of the blotches is consequent on the atrophy of the papillary layer of the corium. The sebiparous glands are often visible through the thinned tissue which covers them, and the atrophy of the hair-follicles and hair-bulbs is evinced by the entire demolition of hair when the scalp is the region attacked.

No. 391 is a model of the face and side of the head, showing *lupus erythematosus*. Three patches of the disease may be seen; one on the forehead, another, of oval figure, partly erythematous and partly cicatricial, in front of the ear, and a large circumscribed patch that extends from the back of the ear over the mastoid process; on the latter the hair has been destroyed, and the integument is in a state of partial atrophy. The patient was 50 years of age, and this was her second recourse to hospital after an interval of five years. The treatment consisted of baths, the application of tincture of iodine, tincture of the perchloride of iron, and of an ointment of the iodohydrargyrate of potassium; she quitted the hospital considerably improved.

No. 392 is a plaster cast of the nose of a young lady, illustrating very strikingly the appearance and thickness of the crust in this disease.

No. 393 is another model, illustrating *lupus erythematosus* of the cheeks; the disease presenting a retrograde stage. The morbid process is evidently exhausted within the area of the patches, but active at their circumference, giving the disease a marginate character, and suggesting the term "*lupus marginé érythémateux*," by which Hardy has designated it.

The disease bears evidence of having originated in a cluster of circular patches which have become blended together towards the centre, but retain their circular and annulate figure at the circumference. The central area is pale and slightly depressed, and has more or less the character of a cicatrix from destruction of the papillæ cutis and the substitution in their place of a stratum of connective tissue. The margin is papulated from point to point, and in a state of desquamation; it is abrupt towards the area, and fades externally into the tint of the adjacent skin. Around the circumference may be seen several small spots in an incipient and progressive form. The disease, as here represented, is doubtless of some years' standing, and the patient of the female sex. No. 394 is a model of the face of a girl of 17, a laundress. The cheeks are covered with a dull crimson-coloured erythema, abruptly circumscribed at the borders, and connected under the chin by several isolated circular patches. The pathognomonic characters of the erythema are:—first, its dull crimson hue, mottled with a purplish tint; secondly, its circumscribed and slightly raised border; thirdly, a greyish epidermic concretion apparent in several parts, but not well marked in this particular case; fourthly, a dilated and impacted state of the pores of the follicles, also but little evinced in this instance; and, fifthly, a subsidence of prominence and colour in certain parts, as, for example, near the lower eyelids, where the vascular congestion is gone and the colour normal, but where the skin presents the appearance of a superficial cicatrix. In the present case, however, the most prominent sign of the disease is the fixed, enduring, stubborn crimson redness, abruptly circumscribed, and contrasting peculiarly with the colour of the normal skin: a pathological condition which has remained unchanged for nearly three years.

Among the minor characters to be observed in

this case are the flat papulæ to be seen at the circumference of the blotches, which indicate the follicular origin of the inflammation. And the large blotches may be considered as being formed by the blending of such follicular congestions. Two or three partially isolated blotches with red borders and a fawn-coloured depressed area may be considered as specially characteristic of the disease, but most of all are the cicatricial indentations with marginate outlines just below the eyelids. Nothing like these appearances occurs in what I will venture to call normal erythema, or in syphilis; it is exclusively restricted to this singular affection, an erythema of a strumous skin. In the notes of the case furnished to me by M. Vidal, he calls the disease lupus erythematosus; but in the Paris collection it is named "scrofulide érythémateuse"; in the latter it is numbered 258.

M. Vidal states that the affection began as a pimple on the left cheek; six months later the extension of the inflammation to the whole face gained for it the name of erysipelas; and nearly two years afterwards the disease presented the appearances seen in the model. The remedies employed in the treatment were:—Cod-liver oil; syrup of the iodide of iron; tincture of gentian; sea-water baths; and the Vigo plaster—a plaster of mercury. At the end of three years, from the first outbreak of the disease, there were symptoms of slow but manifest improvement, and a distant expectation of cure.

No. 395, a model of part of the face, exhibits a more advanced stage of lupus erythematosus, not the congestive and progressive stage, but the degenerative and retrogressive stage. One patch extends across the nose, and another has an annulate figure on the cheek. Both patches are partially coated with epidermic desquamation. The model, however, is intended to show the effects of scrofulosis on the gums, and particularly on the teeth; the former are

tumid and vividly red, and the teeth are deformed ; one half the crown being properly formed, the remaining half towards the gums being discoloured and denuded of enamel ; while an abrupt line of demarcation distinguishes the two portions. All the front teeth, both of the upper and lower jaw, have suffered similarly. In the Paris collection the model is named "scrofulide des dents," and is numbered 270.

Let me recapitulate in a few words the characters of this remarkable disease:—*First*, there is the erythema occurring in a circumscribed patch, ranging in size from a few lines to an inch in diameter ; it is superficial, circumscribed, stationary, dry, and punctated by the apertures of the follicles ; its colour being of the dull red or crimson-tinted hue ; there is no itching, exudation, or encrustation. *Secondly*, the patch becomes slightly depressed in the centre and elevated towards the border ; the area is coated over with a thin, rugged, greyish concretion, composed of desiccated epithelial and sebaceous exuviae ; and when this is cleared away the surface of the corium is found in a state of atrophy, shorn of its papillæ, deprived of its bloodvessels, and presenting the appearance of a cicatrix. *Thirdly*, the deeper anatomy of the corium is brought into view by the destruction of the superficial portion ; the follicles are conspicuous for their size, distended with dry epithelial exuviae ; the sebiparous glands are also visible and enlarged by the accumulation of their altered contents, and in some situations where these glands are numerous they appear to form a tessellated stratum, closely packed, and merely separated from each other by a slender framework of areolar tissue which supports a coarse plexus of large bloodvessels. Finally, in the hairy parts of the skin the hair-papillæ are atrophied, and the part remains permanently bald.

There is another feature of this curious and

pathologically very interesting disease which deserves especial notice. It is essentially chronic in its nature, lasting for years, and its consequences for a lifetime. Nevertheless, in its more active stages, it will suddenly and spontaneously disappear, and in rare instances not a vestige will be left behind; very frequently our patients inform us that one or more patches have entirely vanished, although what remain may be indomitable. This tendency to spontaneous improvement is a great encouragement to our exertions in endeavouring to cure it thoroughly, and is a fair ground for a favourable but nevertheless a cautious prognosis.

It must also be mentioned that occasionally, this disease will burst out as a general erythema, and while it subsides over the greater part of its extent, may remain fixed and immovable in other parts.

Neumann, to whom dermatological science is so much indebted for his microscopical researches into cutaneous pathology, has given us a drawing of the state of the skin in lupus erythematosus in its active stage. He believes the disease to originate in the inflected pouches of the corium which surround the follicles; but it is evident, both from observation of the disease itself, and of his own figure, that the papillary layer of the corium is excluded, by such a supposition, on insufficient grounds, and that it would be more reasonable to conclude that the corpus papillare was equally the seat of origin of the affection with the vascular boundary of the follicles. In fact, the epidermis of the morbid surface is just as gravely disordered as are the epithelial walls and contents of the glands themselves. I believe that the disease is not elective in the sense of attacking the glands chiefly, and that it is not the gland-tissue which is primarily affected; the glands suffer most seriously only because they form a part of the structure of the corium and are deprived of the

usual facilities of escape of their accumulated contents.

Neumann's figure represents, as I have already stated, the congestive and hypertrophic period of the disease, when from the presence of an augmented quantity of blood, hyperplasia is active. The papillæ cutis are enlarged and elongated; their stroma is dense, and its meshes occupied with growing cells. In the corium the meshes of the connective tissue are more or less loaded with minute cells, which here and there are collected into small groups. Around the sebiparous follicle the connective tissue also forms a condensed layer, likewise infiltrated with nascent cells, and the epithelial lining of the follicle is thick and condensed. At a later period, and as it might be termed, the pathognomonic period of the disease, the hypertrophic appearances would have given place to those of atrophy; epidermic formations would be found in excess, and the epithelial material of the follicles largely augmented in consequence of the mechanical impediment to its escape.

It may be instructive to compare this representation of lupus erythematosus with a similar one of lupus vulgaris; the difference is the same as that between a scantily populated village and an overthronged city. There is evidence of a more abundant supply of the fluids of nutrition and growth, albeit of perverted nutrition. The papillæ cutis are greatly enlarged and as it were distended with nascent cells, and these cells are so numerous and abundant, that they have broken through the barrier of the rete mucosum, and have diffused themselves amongst the cells of the epidermis. Cell-infiltration is a term which would seem to be very fairly applicable to this state. Then the fibrous tissue of the corium is everywhere permeated with considerable clusters of similar cells, and they are found likewise in the connective tissue of the panni-

culus adiposus. We may at once perceive the consequences of the failure of vitality of these crude and abundant cells; they would break up the tissues in the meshes of which they are interposed, and they would contribute to a general dissolution and destruction of the whole.

CAUSE OF STRUMOUS AFFECTIONS.—If we ask ourselves the CAUSE of strumous affections,—including scrofula, lupus, and lupus erythematosus—we shall none of us I believe hesitate to answer *defective nutritive function*; and this same answer will apply to struma of the most recent period, commonly called scrofula, wherein the lymphatic glands are likewise affected; to lupus vulgaris, in which the disease begins in the corium and the lymphatic glands are only accidentally implicated; to lupus non exedens, in which the lymphatic glands entirely escape; and to lupus erythematosus, in which all evidence of scrofula is absent, and which can only inferentially be admitted into the same group of affections.

There are some differences also, in respect of cause, between dermatostruma and lupus vulgaris on the one hand, and lupus non exedens and lupus erythematosus on the other. The former belong to the earlier, or as they may be termed formative and nutritive periods of existence; the latter may arise at any period of life, and lupus erythematosus is as common in the adult as at an earlier period.

Dermatostruma is an affection of the young, and is pretty equally distributed between the sexes; lupus vulgaris is more common in the female than in the male, and is apt to show itself at the critical period of puberty and between that age and that of the full completion of the growth of the body. Lupus non exedens is also more common in the female than in the male, and may occur at any period of early life. So also, is lupus erythematosus most common in females, at an adult than in

younger life, and not unfrequently is developed at the period of pregnancy.

In a paper on lupus erythematosus, which I published in my "Journal of Cutaneous Medicine" in 1868, in which I gave the statistics of 56 cases of that disease, the relative frequency of the affection in the sexes was 41 for the female, and only 15 for the male. In nearly half these cases, namely, in twenty-two, the disease became developed between the ages of 20 and 30; in ten only it occurred between 10 and 20; whilst in one patient it made its first appearance at the age of 71. The chronic character of the affection was shown by its duration, in one instance, for forty-five years; in six instances for a period of ten to thirteen years; in seventeen instances for five to ten years; and in twenty-four, from one to five years. In fifty-two out of the fifty-six cases the disease occurred on the face, sometimes alone, sometimes in association with a similar affection of the scalp or fingers. But of the different parts attacked the most frequent of all was the nose, which numbered thirty-six cases; next the cheek, which numbered twenty-four cases; fingers and toes, twelve; scalp, eleven; eyelids, ten; ears, seven; and upper lip, four.

In a practical sense experience leads us to look for common scrofula of the integument or dermatostroma most commonly on the neck, in the neighbourhood of the concatenate cervical glands; for lupus vulgaris on the nose; for lupus non exedens on the cheek; and for lupus erythematosus, as we have just seen illustrated, on the face, and especially on the nose, cheeks, and scalp. It is possible that dermatostroma may begin in the glands and thence propagate to the integument, the subcutaneous tissue as well as the corium,—the adenoid degeneration. But it is equally possible, as a consequence of faulty structure or defective nutrition, that it may attack the skin primarily,

just as it might attack any other of the tissues of the body, and notably the bones and the cartilages.

The strumous diseases all of them represent feeble vitality or feeble power; and are very commonly transmitted as such, and constitute hereditary disease. At other times the strumous tendency is accidental, engendered by cachexia; the cachexia being itself the consequence of a variety of causes; for example, deficient or bad nourishment, malarial influence, and blood dyscrasiæ, such as are produced by phthisis, cancer, or syphilis. In this way syphilis, which has no direct relations with scrofula, may become an indirect cause of strumous disease, and consequently of lupus.

DIAGNOSIS.—The diagnosis of a disease, or of a group of allied diseases, is a matter of so much importance in relation to their therapeutical management, that it may be worth while to put ourselves, in imagination, again in presence of the patient, and note the pathognomonic characters of the strumous affections, as compared with other diseases with which they might be confounded.

Diseases of any one organ must of necessity present many points of resemblance, and frequently the resemblance is so close that even the best-informed and the most cautious might be led to mistake one disease for another. In practice it will not always be found perfectly easy to distinguish between dermatostruma, lupus vulgaris, lupus non exedens, and lupus erythematosus. In typical cases there may be no difficulty whatever, but sometimes their pathognomonic characters are not very sharply defined, and at other times a confusion of appearances may be the consequence of prolonged duration or of foregone treatment. An abscess with thinned integument, or an ulcer with flabby edges and sinuous passages, associated with swollen lymphatic glands, might be pronounced at once to be a dermatostruma. An ulcer with angry edges and tumid

granulations projected from the nose might unhesitatingly be termed a lupus vulgaris, and especially so if the ulceration manifested a destructive character. An amber-coloured transparent tubercle developed on the seemingly healthy cheek of a growing girl cannot be other than a lupus non exedens; and a red blotch, defined in its outline, localized on the nose or cheeks, not a mere erythematous redness, but accompanied with a disorganizing change in the skin, immovable and persistent, is a certain exemplification of lupus erythematosus; certain, long before the atrophic transformation is discoverable. But it cannot be denied that a worn-out dermatostruma or lupus vulgaris may present a very close resemblance to a long-standing lupus non exedens, or to a lupus erythematosus; and as we have seen in the instance of the models which have just been passed in review, the terms "scrofulide" and lupus are sometimes used synonymously. Moreover, where scrofulosis is active, all the now-mentioned forms may be observed on the same patient, as in the case Nos. 363, 364, in whom, besides serpiginous dermatostruma or lupus vulgaris, there were present also lupus non exedens on the nose, and lupus erythematosus on the scalp.

Scrofula or struma being in its nature a general cachexia, its manifestations by the skin present a very near resemblance to some of the manifestations of another well-known general cachexia, namely, syphilis; and in certain cases it would be difficult, unless aided by the medical history of the patient, to determine the very important question whether a given eruption were a scrofula or a syphilis. In both diseases there prevail the same languid innervation and circulation, the colour of the part is similar, and the destructive changes very much alike. There can be no doubt that scrofula in children has sometimes been mistaken for hereditary syphilis, and I have already had occasion to remark

that the syphilous cachexia in the parent is very apt to engender the scrofulous cachexia in the child, and possibly, in some instances, the cancerous cachexia in the adult. As a consequence of their pathological alliance we likewise have occasion to observe a similarity in those organic changes which constitute the distinction between an early, a later, and a latest period, for in both we find the prominence or papule, the ulcer and the gumma. The amber-like tubercle of lupus non exedens being an exact type of the gumma of an ancient dermatosyphilis, and the erosion of the corpus papillare of the skin and atrophic alteration of the corium, an identical consequence.

TREATMENT.—We now come to the therapeutical consideration of the strumous affections, and find that, as in other diseases of a constitutional nature, our attention must be directed to the improvement of the health of the individual as well as to that of the part. Our constitutional treatment must have for its aim to improve the nutrition and vitality of the patient, and we must pursue a conservative treatment with respect to the local affection.

Amongst the constitutional remedies, food, air, exercise, and temperature take a prominent place; and these must be regulated according to the age of the patient. Nourishing food is especially necessary at the nutritive period of life, namely, among the young, and the meals should be regular as to their succession, the material of the food being meat, fat, eggs, wheaten bread and puddings, sugar, milk, beer, and a moderate proportion of well-cooked vegetables. The nutritive capacity of each meal should be as nearly similar as possible, in order to restore the waste which may have occurred in the interval, and the rest of the stomach should be left undisturbed between the regular period of meals.

But as it not unfrequently happens that the

appetite is fanciful and fastidious in these instances of morbid temperament, it may be necessary to provide a variety of food, and it will often happen that a food not strictly conformable to our rule will be that which is the most acceptable to our patient. In such cases it may be necessary to bear in mind the words of wisdom of our master Hippocrates :—“ An article of food or drink which is slightly worse but more palatable, is to be preferred to such as are better but less palatable.”

The importance of air in strumous affections has led to the popularity of certain parts of our kingdom in reference to these diseases; for example, the easternmost point of the county of Kent, and notably Margate. The medicine of the air of this part of our coast would appear to be its abundant proportion of oxygen, possibly of ozone. The oxygen creates waste, and waste, especially at the nutritive period of life, makes a demand for restoration by way of appetite and food, and food renovates the whole system, together with the faulty parts of its structure. Sea-bathing when properly conducted, tends to a similar good result; the naked skin becomes oxygenated at every point, the beating waves shampoo the integument, and exert a tonic influence on that vast expanse of nerve-substance which is spread out in the surface of the corium. Possibly iodine may find its way into the organization in the most genial and acceptable form by residence at the sea.

Exercise, again, is the agent for the preservation of that large component of our bodies, the muscular system, in a state of health; it makes an immediate demand on innervation and circulation, increases the vigour of the nervous system and of the blood-vessels, promotes the removal of waste material from the body, creates a necessity for new matter to supply the place of the old, and engenders comfort and warmth.

Temperature again is not to be excluded from our consideration; exercise, as I have just remarked, must be regarded as an useful medicine in scrofula, as contributing to the production of warmth; and when the condition of the patient is not favourable to exercise, warmth must be supplied by other means, namely, by well-selected and appropriate clothing. It has seemed to me to be an error of management in our seaside establishments for the feeble constitutions afflicted with scrofula, that warmth is not sufficiently regarded. In recognition of the importance of warmth, they are generally closed during the winter season; but in our climate, spring, summer, and winter are not without their bitter days of cold, doubly severe to the weakly invalid. And it has been forced on my attention by reflection on the subject, that it would be highly advantageous to the scrofulous patient if, instead of being obliged to make his way to the sea in an ungenial temperature, the sea could be brought to him in an apartment maintained at an equable and temperate heat, and applied to his body by the manifold adaptations of the douche. Other and collateral, but no less valuable advantages would flow from this method of application of the sea, namely, degree and duration of force, which could be exactly regulated by the douche, and the use of the remedy at the most suitable portion of the day in reference to meals. In a word, I would endeavour to place a great medical remedy, the sea, under the control of medical prescription and direction, instead of leaving it uncontrolled to the fancy and caprice of the patient.

Next to food, air, exercise, and temperature as medical remedies for the curative treatment of scrofula, we have special dietetic substances and tonic medicines. Cod-liver oil possesses unusual value in the diseases under consideration, it is easily digested and easily assimilates with the nutritive fluids of the

body. It is possible that it may genially blend with the nerve-substance, and conduce to a more healthy nutrition of the whole of the tissues of the economy. It often proves highly acceptable to the patient, particularly to children, and then undoubtedly is of the greatest service: the time for administering it is just at the close of a meal; the quantity, one drachm to four; the vehicle, orange-juice or home-made wine, orange or ginger; and the frequency of the dose, three times a day.

Other remedies useful in these diseases are: iron; iodine; arsenic; phosphorus; strychnia; and lime. Iron, as an important constituent of the red particles of the blood, which are usually deficient or pale in scrofula, is, as it were, a natural element of the food in the scrofulous constitution, and its representatives are numerous; they are, the *vinum ferri*, which may very conveniently be combined with the cod-liver oil; and the phosphate of iron, and iodide of iron,—remedies suitable for adults.

Iodine has long maintained its place among anti-scrofulous remedies, and still continues, and is likely to continue, one of our most valuable medicines.

Arsenic, as a nutritive tonic, is also a very useful remedy; it is convenient to combine it with iron, and it is in no way incompatible with the rest of the remedies I have mentioned. Where a child is ill-nourished, although abundantly fed, and where we may presume that the appropriating power of nutrition is absent, nothing restores that power more speedily and efficaciously than arsenic.

Phosphorus, as a constituent of nerve-substance and of bone, is another very valuable remedy in scrofula. It combines very easily with cod-liver oil, and the phosphoretted oil is often more active in restoring nutritive power than the cod-liver oil when taken separately. Then again we have the syrup of the phosphate of iron, and also the hypophosphide of lime.

Strychnia, as a nerve-tonic, becomes an useful remedy in combination with cod-liver oil, with iron, and also with arsenic.

Lime also, as a considerable element of composition of the various structures of the body, is found to be serviceable in scrofulous diseases; and, especially, that excellent salt, the hypophosphide of lime.

In this short catalogue of remedies I have comprehended only those which are supposed to exert a specific influence on scrofula; and these are in consequence especially useful to the young. But in adults there may be other causes of debility than mere nutritive disturbance, which may call for the employment of our more ordinary tonics; for example, quinine, bark, the mineral acids, and vegetable bitters.

In similar cases, also, no rule is more necessary than that which provides for the proper regulation of the functions of digestion and excretion. I have sometimes seen good result from a course of purgatives followed by tonics; and find advantage, not unfrequently, in prescribing the perchloride of mercury with hydrochloric acid and bark.

I had occasion to remark when discussing the diagnostics of the strumous affections, that they sometimes bear so close a resemblance to syphilis of the skin as to be suggestive of doubt as to their real nature; but, although this is the fact in regard to resemblance, the mode of treating the two diseases locally establishes a well-marked distinction between them; for, while syphilitic diseases require no local treatment whatever beyond simple cleanliness, strumous diseases make a considerable demand on the resources and ingenuity of the surgeon.

When struma presents itself for our treatment in the form of a local phlegmon, threatening to become an abscess, and when, associated with such a phlegmon, the neighbouring lymphatic glands are enlarged,

the most successful treatment will be found to be to cover both one and the other with a plaster of opium and galbanum spread on washleather, and so shaped as to include the affected part without overlapping the neighbouring sound skin. The plaster will soothe the inflamed tissues; and it is not too much to hope that the phlegmon will disperse without suppuration, or that the glands will recover without softening and ulceration. The plaster should be allowed to remain until it loosens and falls off, and then a second, and, in due time, a third may be applied. If the suppuration of the phlegmon be inevitable, it will be well to make two or three slashes in the centre of the plaster to let the discharge find its way out at its will. I believe this plan to be very superior to opening the abscess with the lancet; and that every day that the spontaneous opening can be deferred is an absolute gain. On the other hand, I know of nothing more likely to increase the evil than the heat and moisture of a poultice; the affected tissues are already feeble and reduced in vitality, and the poultice would tend still more to depress their vital energy.

Next to the sedative and mildly stimulating plaster, the tincture of iodine painted on the phlegmon and on the enlarged glands is also a valuable application, and will assist in diminishing the contents of the abscess, and reducing the bulk of the glands.

When the abscess has burst and an ulcer is formed, or in the case of a cluster of ulcers, and also where the ulcers prolong their sinuous length into the subcutaneous tissue, they should be dressed with the yellow basilicon ointment; and occasionally they may require the mildly stimulant force of the tincture of benjamin, balsam of Peru, or cajepout oil. In some instances the nitrate of silver is found of use; in others, a solution of chloride of zinc; and now and then the stimulating action of tar is productive of benefit. The flabby borders of these ulcers are

often red and irritable, and the redness is diffused for some distance around them. In this state a thin paste of chalk forms an admirable protection to the tender skin, is calculated to subdue the inflammatory congestion, and to prevent the inflamed tissues from falling into an ulcerated condition.

In certain regions, as on the back of the hand and foot and also in the limbs, we are enabled to add to our other treatment the support and gentle pressure of a bandage.

These ulcers are always slow and torpid in their nature, and generally require a variety of treatment and an assiduous application of remedies. *Lupus vulgaris* in all its forms, and particularly in the tuberculous form, calls for the use of caustics. We may probably have to contend with an exuberant growth of granulations or with a fleshy mass composed of cells turgid with serous fluid, without contractile energy to expel their contents, and of such feeble vital power, that a slight increase of congestion causes them to break up into a softened pulp or sink into a state of slough. In such a case, destruction by caustic is our only resource, but happily it is a very effectual one, for it not only removes the exuberant growth, but at the same time causes contraction of the neighbouring cells, and checks the pain and irritability which may have previously existed.

Our caustic remedies are numerous, and hardly less so are the opinions of surgeons as to their selection. One operator may prefer the galvanic cautery, another the concentrated acids, another chloride of zinc, or the various caustic pastes; and others again the pernitrate of mercury, nitrate of silver, or caustic potash. In selecting any one of these we should be guided by a few leading considerations; and perhaps the first that should govern our choice, for the remedies may all be pretty equally effective, is, which will give the least pain?

In the use of remedies in general, it may be said, that it is the tact with which the remedy is employed rather than the special qualities of the remedy itself, that governs its power; and there is much in our familiarity with and experience of the agent we employ. I have neither practised nor have I seen the operation of the galvano-caustic, but I am led to believe that it is not only very effective but comparatively painless, and in course of time may come to be pretty generally adopted.

But I have had a long experience of another caustic, namely, potassa fusa, which is not only perfectly efficient, but is remarkable for the short duration of the pain which attends its use, and is applied with extraordinary facility. The most simple method of using it is in the form of solution, equal parts of potassa fusa and distilled water; with a small sponge brush, that is, a fragment of sponge fastened to the end of a bit of stick by means of sealing-wax, the quantity of the solution can be accurately regulated, and may be minimized to any convenient extent by shaping the sponge into a point with the aid of the scissors. The pain which accompanies the application is undoubtedly sharp, but by no means severe, and is borne by timid persons without much apparent suffering, while at the end of ten or fifteen minutes the pain entirely ceases, and if needful a second application can then be made. In general, where there has existed in the part a sense of fulness, of throbbing and aching, those sensations likewise pass away with the pain of the caustic, and a feeling of comfort is experienced by the patient.

The quantity of the caustic solution employed must of course be determined by the extent of the ulcer both in breadth and in depth, and the bulk of the hypertrophied granulations. It may be used with the utmost freedom, as no fear need be apprehended of its extending beyond the spot to which it

is applied; and in cases of exuberant lupus it is necessary that the caustic should permeate the morbid tissues often to a considerable depth. Like other caustics employed for similar purposes, the common but erroneous expression of *electiveness* may be adopted; with respect to the potash solution, it penetrates the new and feeble tissues rapidly, and completely destroys them, while its action is arrested by the older and more vitalized tissues, which form the boundary and as it were a barrier to the disease.

The effect of the caustic is to cause a copious exudation of a viscous and transparent amber-coloured fluid as dense as white of egg, combined with an ample excretion of a black jelly-looking mass consisting of blood. This should be allowed to dry on the ulcerated surface and form a crust; and in the course of a few days the crust will become loosened by the purulent secretion of the ulcer, and be ready to come off. It may be that no exterior dressing will be required, or, if required, a dressing of oxide of zinc ointment is all that will be needed. I cannot too strongly call attention to the fact, that besides removing the morbid tissue of the ulceration, the caustic empties the inflamed skin immediately surrounding the ulcer of its infiltrated fluid, and thereby subdues the swelling and hardness, relieves tension and pain, and checks the progress of the morbid action into the sounder structures.

When, after a few days, the crust has come off or the slough separated, the process of cauterization may again be repeated in a precisely similar manner as before, and continued at short intervals until the granulations of the ulcer are of a healthy character and tend to cicatrization. It is not uncommon, even after one application, to find a nose extremely distorted from its natural form by the monstrous growth of a lupus, brought to its normal shape; and in every case in which the disease is confined to the integu-

ment a steady perseverance with this process will complete the cure; where, however, the mucous membrane, the cartilages, and bones are affected, the disease is more rebellious in its submission to treatment.

In cases in which the use of the caustic may be undesirable, considerable benefit will be obtained from the local application of the tincture or liniment of iodine; and both these remedies may be rendered more active in their effects by covering the application with some kind of impermeable tissue. Some years ago, I called attention to an ethereal solution of iodine and mastic employed in the Margate Infirmary, and more recently, Dr. Rowe, in answer to my inquiries, has informed me that of late that remedy has been given up on account of the difficulty of preparing it, and furthermore, because it was painful in its application. The tincture of iodine of the British Pharmacopœia has now taken its place, and when it is desired to render the iodine more energetic in its action, it is covered, "while still wet, with a thin piece of gutta-percha foil." In some cases of a chronic type, he has used with success iodide of starch dusted on a piece of wash-leather spread with emplastrum plumbi.

It was in a case of lupus serpiginosus of the arm, which had existed for nearly thirty years, was attended with inflammation, heat, stiffness, and thickening, and which interfered with the movement of the limb, that I found so much benefit result from frictions with the Gurjun liniment, as I have already mentioned in a former lecture. The lady, who was the patient in this case, declared that she had never before used any remedy which so speedily relieved her suffering and was so useful in restoring the appearance and comfort of her limb.

Lupus non exedens evinces a more stubborn character in respect of treatment than lupus vulgaris: when seen at an early period, and when of

small extent, a single application of the potassa fusa may be sufficient to exterminate it; but when it has been long in existence it is apt to crop up unceasingly in small tubercles and spread largely by its circumference; its increased dimensions rendering treatment necessarily more difficult; nevertheless, the only curative treatment is the caustic, and this must be persevered with unremittingly. As in lupus non exedens there is usually no open ulcer, the caustic solution is applied on the surface of the cuticle; in a few minutes a blister is formed by the exudation of an amber-coloured fluid; and the exudation thus produced is often sufficient to empty and destroy the feeble cell-tissue which constitutes the material of the disease. The exuded fluid is left to dry into a thin crust, and at the fall of the crust the skin is very commonly healed. In this instance the caustic has taken effect and performed its office without any lesion of the surface. At other times it may be necessary to penetrate more deeply, in which case the blister may be wiped away, and the caustic solution applied on the surface beneath.

I have mentioned the zinc ointment as an appropriate dressing for lupus vulgaris; the same remedy is useful in lupus non exedens when there exist heat and dryness of surface. But more commonly the most convenient application for the non-ulcerating lupus will be a lotion of lime-water with oxide of zinc and calamine, three or four drachms of each of the powders to half a pint of lime-water; a lotion which not only coats over the inflamed surface with a thin pellicle of powder, but which, in consequence of the skin-colour of the deposit, serves to conceal as well as shield the disease.

This lotion, and also the zinc ointment, are two of our best local remedies in *lupus erythematosus*; which is generally exasperated by strong applications, and is more difficult of management than the preceding

forms of disease. The indication for cure is to arrest the atrophic process which usually follows the congestive stage; and this we may presume would be best effected by means of moderate stimulants, such as the tincture of iodine; ointment of the iodide of sulphur; and sulphur ointment with tar. But I am bound to confess that, after many trials, my confidence in local applications, with the exception of the lotion and ointment of zinc, is very restricted; and I am disposed to rely most strongly on internal remedies. A young German physician lately informed me that the method of treatment which he had seen most successful, was to puncture the surface with a lancet so as to induce bleeding from the capillaries, and then to rub some strong stimulant into the affected skin. Of this treatment it must be said that the theory is suggestive, but by no means encouraging. Even from blistering the morbid skin with the solution of potassa fusa I have derived very little advantage.

LYMPHADENOMA.—In grouping together common strumous inflammation of the integument and lupus, I have been chiefly influenced by the pathological condition of the skin in advanced stages of these two affections; the differences between them being by no means greater than we see evinced by the various forms of cutaneous disorder manifested by syphilis; the early stages of syphilis of the skin being a simple erythema, and its later stages a degeneration of tissue very closely resembling that met with in lupus non exedens, which may be regarded as the latest period of lupous disease. So it appears to me that the differences evinced by the pathological condition of the skin in simple struma, in lupus vulgaris, and lupus non exedens, represent periods of time rather than diversity of nature. In the earliest period of all, there exists what may be called a strumous erethism, in which both glands

and skin participate; while, in the second and third periods the morbid process is limited to the skin alone.

The absence or presence of enlargement of lymphatic glands is usually taken as the distinguishing characteristic between lupus and struma; indeed, it is from the existence of swollen glands that the word *scrofula* derives its origin. In the shallow seas dividing the islands of Greece, the summits of rocks may be seen in many places just cropping up above the level of the waves, suggesting the notion of a herd of swine swimming in the water; hence, a similar term was given by the Greeks to submerged rocks and swine, namely, *χοιρος*, a rock, and *χοιρας*, a young pig; while a cluster of enlarged subcutaneous glands, from a supposed resemblance to both these objects, received the name of *χοιραδης*; which the Latins translated by the word *scrofula*. And there can be no question of the fact that the struma of the growing period of life is manifested by a redundant formation of gland-elements, giving rise to enlarged lymphatic glands. But it by no means follows that struma at a later period of life should be equally accompanied with this symptom; nor that the absence of enlarged glands should render lupus the less a strumous affection.

Inflammation with swelling of the lymphatic glands has received the name of lymphadenitis, and lymphadenitis is very commonly associated with the accumulation of lymph-tissue around as well as in the substance of the glands, and frequently in the integument in the neighbourhood of affected glands. It is in this way that we must account for the large, hard, infiltrated mass which is so frequently met with in the axilla in cases of eczema, and which is commonly but improperly attributed to boils. After a while these tumour-like masses soften in the centre and subsequently break, giving origin to fistulous channels traversing the morbid tissue in various

directions, and very difficult to cure. Thus it is that we are enabled to connect tumours in the integument composed of gland-tissue, namely, lymphadenomata with lymphadenitis, and to comprehend the remarkable example of this affection exhibited in the models, numbered 397, 398, and 399. This very curious and interesting case was under the care of Dr. Hillairet in the St. Louis Hospital, and a careful history of it has been given by the house physician, Dr. Xavier Gillot. The disease was recognized in the hospital as an example of the affection termed by Alibert, *mycosis fungoides*; but, with good reason, Dr. Gillot prefers to name it *lymphadénie cutanée*; while, in England it would be named lymphoma, where it has been made the subject of investigation by several distinguished English physicians; for example, Hodgkin, Bright, Wilks, Murchison, Sanderson, etc., and has been designated after the first of these authors, "Hodgkin's Disease."

No. 397 is a model of the anterior aspect of the trunk of a woman, aged 42; the integument is pale and flabby, and studded over the greater part of its surface with pale crimson-coloured tumours and tubercles, while between the tumours in certain situations, especially in the epigastric region, may be observed clusters of narrow rings of a deep brown colour, each ring enclosing an area which is somewhat depressed and paler than the rest of the integument. The larger tumours are four in number, and are situated, respectively, on the left mamma, over the umbilicus, in the right flank, and in the right groin. The smaller tumours, which are extremely numerous, are congregated in clusters in the right pectoral region and upon the abdomen, particularly in the right flank. Three of the large tumours, and nearly a dozen of the smaller, are in a state of ulceration, and the ulcers present the same general characters. They are superficial, have vertical edges, and look as if the surface had been

nibbled away. There is no thickening of the skin forming their border; the vertical edge is red, and the base sometimes red where the erosion is superficial, and sometimes buff-coloured where it sinks more deeply into the integument. The smaller ulcers are more or less circular in figure, and occupy some part of the summit of the minor tubercles, whereas the large tumours present extensive and deep ulcerations, irregular in outline and irregular also in the level of their base, being evidently composed of a number of minor ulcers which have become confluent. This irregularity of figure and surface is particularly conspicuous on the tumours in the centre of the abdomen and on the right flank. The smaller tumours range in size between that of mere flattened pimples only two lines in diameter and masses an inch in breadth, the common dimensions being half an inch, while the large composite tumours on the mamma and on the abdomen measure upwards of four inches. Some of the tumours are isolated, but a considerable number are coherent, and these coherent clusters are apt to become blended and form large compound masses, the type of the large tumours. The tumours, moreover, present every stage of growth; some are mere nodules in the skin without colour; as they increase in size they acquire their peculiar purplish tinge; some are prominent and smooth, as though from distension, others are flaccid and in a state of collapse, some are flattened, some depressed in the centre, some in a state of softening have a salmon-coloured tint, some have subsided with the exception of a narrow prominent ring, and some have entirely disappeared, leaving the portion of skin which they occupied, thin, depressed, pale, and achromatous, but surrounded by a margin of deep brown pigment. In one of the tumours only, namely that on the left mamma, is there any trace of vessels, and these present a simple state of angiectasia very different

from the large venous ramifications which are met with in carcinoma. The breasts are small from atrophy of the mammary glands; large corrugated cicatrices are seen in the axillæ, and in the latter as well as on the pubes there is an absence of hair.

No. 398 is a model of the left arm of the same patient; the limb is emaciated, and presents a series of pathological lesions, namely, erythematous patches in a state of furfuraceous desquamation, papulæ which have been torn by the nails and have become covered with a brownish-red crust, red lines marking scratches by the nails, and tubercles of small size resembling those on the abdomen in the preceding model. These tubercles follow the direction of the outer border of the arm towards the axilla, and one of large size over the upper part of the biceps, is very characteristic of the disease. The state of the nails is also worthy of observation; they are stunted and thick, and have a tendency to assume the form which has received the name of onychogryphosis.

No. 399 is a model of the face of the same patient, exhibiting an advanced stage of emaciation; numerous patches of dry and squamous eczema are dispersed symmetrically over the surface; some are flat and some prominent, some diffused, some circumscribed, but all more or less circular. A circumscribed and prominent circular patch, depressed in the centre, is seen at the outer extremity of the eyebrow; and others of a similar kind, but less prominent, at the angles of the mouth, in the middle of the cheek, and in front of the larynx. These patches present every evidence of being eczematous in their nature; the skin is thickened and coated over with a rough desquamation, and the patches at the angle of the mouth are fissured. To such patches Willan assigned the name of lichen agrius. The pathological appearances presented by this case may therefore be summed up as follows:—"1,

eczematous patches ; 2, scratches, denoting pruritus ; 3, tumours in various stages of growth and decline ; 4, cicatrices and pigmentary stains left by the tubercles ; and 5, ulcers.

Dr. Gillot has published a very able and elaborate pamphlet on the history of the case, and to this pamphlet I am indebted for the following narrative:—

The patient, a milliner, aged 42, although descended from a strumous stock, had been free from disease, and had enjoyed an average state of health until she reached 37 ; so that the date of her present illness extends back for a period of five years. At the time in question, and without any symptoms of constitutional disorder, she perceived a blotch of redness of the size of the hand, which occupied the region of the umbilicus ; it was itchy and gave forth a slight exudation, and was, in these respects, an eczema. Soon after, similar patches, but of a more limited extent, appeared on the lower extremities, especially the thighs, and others were developed in succession on different regions of the body. The pathological course of the patches was, after a short interval of exudation, to desquamate and return gradually to the normal state of the skin ; but the prolonged continuance of the disease became a source of vexation, and, after enduring it for nearly a year, she applied for relief at the St. Louis hospital, and at the end of two months was discharged from that institution cured.

Six months after her discharge the eruption returned with the same characters as before, but was more general in its distribution ; there were redness, pruritus, and exudation, then desquamation, and, subsequently, retrogression. Some of the patches were large, flat, and irregular in outline ; others were circular, of small size, slightly prominent, wrinkled, and coated with minute dry scales. They were scattered over the head, back, abdomen, and limbs ; were thrown out from time to time, and be-

coming more and more numerous and inveterate, she again sought the aid of the hospital, and remained three months under treatment before she was able to leave.

But again, and as before, the eczematous patches made their reappearance, and, with but transient intervals of relief, continued to annoy her, without variation of their character, for three years and a half. At this latter period, namely a year and a half before the fatal issue of the case, a new feature was added to her original suffering. Tubercles became apparent in the skin of the chest, more particularly in the left breast, and the latter rapidly enlarged so as to reach in five months the dimensions of the head of a child. The enlarged breast was dense but without hardness; there was no alteration of its colour; there were no large vessels meandering on its surface, and there was no pain. In the next place, the tubercles in the skin of the mamma, consequent on the application of an irritant ointment, suddenly fell into a state of ulceration; and two ulcers were developed which enlarged rapidly, suppurated abundantly and for a long time, and threw off sloughs of sphacelated cellular tissue in the shape of greyish films. Subsequently the bulk of the breast was reduced to the normal standard, and the ulcers healed.

During the growth of the tumour of the breast, numerous tumours of small size appeared upon the chest and abdomen, and especially in the left axilla. And after the healing of the ulcers, similar tumours became developed generally over the greater part of the body, particularly in the region of the umbilicus and on the right breast and shoulder. Some of these tumours softened and ulcerated, and others subsided without ulceration; this was especially the case with two of large size which were developed in the groins, and which diminished to the extent of three-fourths of their original bulk in the course

of a fortnight under the influence of the drain set up in the system by diarrhœa; these tumours at their height having been each as big as a fist.

Up to a period of nine months before her death, the time at which the general eruption of tumours was manifested in the skin, the patient's health underwent little or no deterioration, her only important symptom being, loss of sleep resulting from pruritus. At the latter period, however, her strength gave way rapidly; she became emaciated, the menses ceased, she lost appetite, was distressed with diarrhœa, and took refuge in bed. Such was her state when she was again admitted into hospital, twenty-six days before the fatal termination of the case.

At the time of entrance into the hospital on the latter occasion her emaciation was considerable, her face pale and waxy, but totally unlike the yellowish and straw-coloured complexion of cancer; and the whole body, with little exception, was studded over with small eczematous patches, tumours, ulcers, and cicatricial marks. Some of the eczematous patches were simply hyperæmic, and others squamous. The tumours were dispersed everywhere, with the exception of the head, and were most abundant *wherever the skin had been previously affected with the eczema*; they ranged in bulk between that of a pea and a hen's egg, their common size being that of a hazel nut or an almond, and here and there, where several had congregated together, the confluent mass resembled a tomato. They were distinctly cutaneous, and moved freely on the cellular tissue beneath; they were smooth on the surface, suffused with a purplish blush, firm and elastic, without hardness, and devoid of every appearance of bloodvessels.

The ulcers occupied the summit of a great number of the smaller tumours, and most of those of considerable bulk. When ulceration took place it progressed rapidly, giving rise to a circular superficial

ulcer, bounded by a red vertical border, without thickening; the base of the sore being coated over with a greyish pulp. The confluent tumours, of larger size than the preceding, were surmounted with ulcers of corresponding magnitude, bordered by a scalloped margin denoting their origin from several centres, and presenting an uneven fungous-looking base yielding an abundance of pus; while the largest of all perforated the corium and attacked the subcutaneous cellular tissue, which was thrown off in sloughs of greyish and blackish shreds. These larger ulcers, moreover, exuded a sanious and fetid pus in great abundance.

The cicatricial marks resulted from the spontaneous subsidence of the tumours where no lesion of continuity had taken place; they were circular in figure, smooth, depressed in the centre from thinning of the skin, white from the absence of pigment, and surrounded by a deeply pigmented ring of a deep brown colour. On certain parts of the body, as around the waist and on the abdomen, the integument is singularly marbled by these pigmentary rings surrounding an achromatous area. The cicatrices resulting from ulceration were identical with those proceeding from ulceration in general.

The last weeks of her life were marked by rapidly increasing debility and prostration, hectic with night sweats; diarrhœa; loss of appetite and sleep; hypostatic œdema with incipient ascites. The pulse was weak and soft, never exceeding 112; there was no excess of white globules in the blood, and no albumen or sugar in the urine. In the course of the cutaneous affection the hair of the axillæ and pubes fell off, and some aphthæ were developed in the mouth at the close of her life.

On post-mortem examination, the organs principally diseased were found to be the liver, the kidneys, and the lymphatic glands in the groins, armpits, pelvis, and abdomen. The liver was large, of the

colour of yellow ochre, and uniformly fatty; the fat being infiltrated through its substance. The kidneys showed signs of incipient fatty degeneration; the spleen was a little enlarged, normal in appearance, but somewhat denser and harder than usual; and the heart was small, with a tendency to hypertrophy of the left ventricle.

The axillary lymphatic glands were large; in the groin there were several as big as a hen's egg; the external iliac glands were, some of them, as large as walnuts, and the mesenteric glands were of greater bulk than usual; but those of the neck and of the rest of the body were not altered in size. Section of the inguinal glands showed them to be softer than natural, and the iliac glands more granular in texture; both presented a deep rose-coloured tint, somewhat deeper in hue in the former than in the latter.

In the integument, the redness of the eczematous patches had disappeared and the tumours had singularly subsided in bulk, some had vanished completely, and only in the largest was there left sufficient material for examination. They were found to occupy the entire thickness of the corium, and it was the deeper ulcers only which had penetrated to the subcutaneous tissue. The left mamma had undergone fibrous degeneration, and the fibrous tissue was closely adherent to the ribs and sternum: it was tough and resistant and devoid of adipose tissue. A section of the tumours presented a surface apparently homogeneous and of a rose-coloured tint.

Dr. Ranvier, to whom the tumours were submitted for microscopic examination, reports them as being soft, yielding a juice on scraping like a cancer or lymphatic gland; the juice was lactescent and charged with cells exactly resembling those of a lymphatic gland in a state of irritation. The cells were formed of a mass of protoplasm without

enveloping membrane, and some of the larger cells contained several nuclei.

The whole structure of the tumour he described as a mesh of adenoid tissue, interlaced with the normal elements of structure of the corium, the spaces of which were enlarged and distended. The adenoid tissue was composed of a network of pale, soft, anastomosing fibrillæ, traversed by capillaries enclosed in a reticulated envelope, from which passed off similar fibrillæ in great abundance. Every here and there might be observed a stellate cell, which in like manner gave off radiating fibrillæ, to unite with neighbouring fibrillæ. The fibrillæ anastomose without forming knots, and give rise to meshes which are closely filled with lymphatic cells, identical in appearance and structure with those of lymphatic glands. In sections of these tumours, there were no white globules in the capillary vessels, as occurs in leucocythæmia.

M. Grancher makes the following further remarks on this case. Adenoid tumours are remarkable for the presence of capillaries, which are large, dilated and tortuous, and invested with thick coats; these vessels are enclosed in a newly-formed tissue which takes its origin from the coats of the capillaries, and this newly formed or adenoid tissue is more dense and more richly supplied with lymphatic cells immediately around the vessels than elsewhere. From which we are led to infer that adenoid tissue is formed in the first instance around the cylinder of the bloodvessel, and very possibly in consequence of the escape of white corpuscles from its cavity. After a time the adenoid neoplasm usurps the place of the adipose tissue. The glandular structure of the left mamma in the present case had wholly disappeared, thick bands of dense fibrous substance were found in its stead, and these fibrous bands were permeated throughout with clumps of adenoid tissue. In the spleen likewise, the trabe-

culæ were thicker than usual, and exhibited evident traces of hypergenesis of the lymphatic neoplasm. It would thus appear, that under the influence of a disturbance of nutrition, of a dyscrasia of which the cause may be utterly unknown, there may arise in the organism a tendency to the production, in divers situations, of a tissue of new formation,—a neoplasm—analogue to that which is the normal constituent of the lymphatic glands, in short, a lymphatic or adenoid tissue.

Dr. Gillot remarks on the manifest relation between this affection and leucæmia or leucocythæmia, a disease which, during the last few years, has engaged the attention of some of our most eminent pathologists both abroad and at home. Like lymphoma, the cause of leucocythæmia still remains to be discovered; but the essential differences between them may probably be due to the circumstance of the one deriving its exciting cause from without, and the other from within, and this possibly may also explain the leading distinction between them, namely, that in leucocythæmia there is a predominance of white globules in the blood, whereas in lymphoma the quantity of white globules is not perceptibly increased.

Dr. Gillot makes a great effort to prove that the eruption on the skin is a part of the disease; but in this opinion he will hardly meet with much support. Eczema necessarily implies an unhealthy condition of the organism, and to this in the case before us was superadded a strumous constitution. We have here precisely the conditions which would favour the transmission of irritation of the skin to the axillary and inguinal glands, and gland-irritation, thus established, might then be propagated to the whole system. That is—given a tendency to irritation of lymphatic glands, and cachexia, the possibility of which cannot be questioned, then a chronic inflammation of the skin, such as eczema,

is capable of setting up lymphatic-gland-irritation and its consequence, namely, the abnormal generation of gland-tissue, and furthermore, the intrusion in excess of white globules into the blood.

Since the pathological discovery of a lymphatic-gland neoplasm first became known, I have been accustomed to regard various examples of dense infiltration of the integument giving rise to tuberous masses, as instances of lymphadenoid formation; I refer especially to the tuberous thickenings which sometimes occur in the groin in connection with inflamed glands, and that very remarkable swelling in the armpits which runs on to incomplete suppuration, and which is commonly spoken of as a boil; which is obviously and emphatically a consequence of eczema and one also if not uncommon occurrence. These tumours are met with more usually among women than among men, very frequently where eczematous patients have been for some time confined to bed; and most commonly of all in puerperal patients afflicted with that disease. We have only to suppose the propagation of the gland-irritation which accompanies these formations, to other glands of the body, to have the material groundwork of a fatal eczema.

Seen by the light of the case just described, four of the illustrations contained in our group of eczematous affections, namely—Nos. 52 to 55, would seem to be instances of lymphoma, but the corroborative evidence of enlargement of lymphatic glands, and microscopic examination of the pathological structure of the tumours, is unfortunately wanting.

No. 52 is a cast in plaster of the back of the shoulder of a man 46 years of age. He had suffered from eczema for ten years, and the eczema had assumed in several situations a tuberous form. The tubera were caused by partial and circumscribed infiltration, and from time to time exuded a copious serous discharge. A few of the tubera are isolated,

while the greater part are confluent and blended together into a large tuberos mass. There were many of these clusters of tubera dispersed over different regions of the body.

No. 53 is a water-colour study of the eruption of the same patient, exhibiting the colour, figure, and bulk of the tubera; as also of two blotches, one in the progressive, the other in the retrograde stage.

This poor man was a lingering sufferer from continual attacks of eczema; his skin was pale and flabby, and he died at length from exhaustion. Enlargement of glands was not a prominent feature of his disease, although it no doubt existed.

No. 54, tuberculous hypertrophy of the skin with œdema. Water-colour drawing of the right thigh and knee of a woman aged 47, in whom, subsequent to œdema, the red tubercles and hyperæmia seen in the drawing were developed. Aggravation of the disease led to amputation of the limb. The tubercles bear a close resemblance to those of *eczema hypertrophicum tuberosum*, Nos. 52, 53. The case was published in the "Virginia Medical Journal" for September, 1856.

No. 55, drawing of the left leg and foot of the same patient; the œdematous hypertrophy and tuberculous development are well shown. The disease began in the left leg two years subsequently to the amputation of the right, and the woman died ten months later. The greenish hue of four of the tubercles and of the hollow in the centre of the chief mass is due to gangrene, the subsidence of the level of the latter being occasioned by drainage of its serous infiltration. The cause of the disease could be traced back to weak nerve-power and feeble heart. In her last illness she was under the care of Dr. Silas Durkee, of Boston, and an abstract of her case will be found in the third volume of the "Journal of Cutaneous Medicine," page 502, Janu-

ary, 1870. Both drawings are the production of an American artist, Mr. Nutting.

Dr. Durkee in his narrative of this case remarks that there were two or three tubercles measuring a quarter to a third of an inch in diameter, eight or ten incipient tubercles in the shape of papulæ, and a tubercular mass formed by the agglomeration and fusion of a number of tubercles, this mass measuring in diameter about an inch, and having an elevation of one-third of an inch. The development of the eruption appeared to originate in hyperæmia of the hair-follicles attended with fall of the hair, and followed by papulæ and afterwards tubercles; at an advanced period of the disease there were upwards of a hundred papulæ and tubercles. The confluent tubercles were congregated around the original tubercular mass, which was as large as the palm of the hand and elevated at some points to the height of an inch, while another tubercle of more than three months' growth, measured upwards of an inch. The application of an irritant substance to the tubercular mass caused a deep slough. The serous exudation from the seat of the slough caused flattening of the mass, other tubercles and portions of the adjoining skin lost their vitality and took on the process of sloughing; and shortly before death the leg returned to its natural size, all the tubercles being flattened and their site being simply indicated by corrugation of the skin.

Another case which I extract from my note-book is worthy of mention here, especially as it is suggestive of the kind of constitution in which we might suppose this lymphomatous affection to arise. A lady of delicate constitution was born in India. Her father died of phthisis. In infancy she was the subject of eczema of the scalp; at sixteen, lepra vulgaris made its appearance on the limbs; and at the age of forty-four she first came under my observation for lepra complicated with exudating eczema.

She had likewise other complications ; for example, enlargements in the groins, probably glandular ; but of the nature of the enlargements I cannot speak positively, as she refused to submit to proper examination, and umbilical hernia. From 1865 until 1872, she paid me a visit from time to time for pressing symptoms ; but whenever those symptoms were alleviated she disappeared for a considerable period ; and in the winter of 1872 she died, at the age of fifty-one. For some months before her death I was much struck by the alteration in her appearance ; she became pale, thin, anæmic, and debilitated ; there was likewise a marked change in her legs, particularly the left, which was the one chiefly affected. Both were œdematous, but on the left was a globular fungus-looking growth, as big as a fist, that exuded a quantity of offensive serous fluid, and subsequently passed into a sloughing state ; there were likewise numerous but smaller tumours dispersed over other parts of the leg. I have no doubt that Alibert would have claimed this case as one of *mycosis fungoides* ; neither do I doubt that a careful exploration would have failed in discovering tumid glands, and post-mortem examination, lymphadenoid accumulations.

This poor lady may be said to have been the victim of three diatheses as the basis of her feeble constitution ; first, the strumous, and, therefore, glandular diathesis, inherited from a consumptive parent ; secondly, the leprous diathesis, inherited or engendered from the same source ; and, thirdly, the eczematous diathesis.

In the present group of adenoid neoplasmata, we must likewise find a niche for a model representing the earliest action of an irritated skin on the lymphatic glands and vessels, and the connective tissues surrounding the latter. If we wished to exemplify inflammation of glands from the presence of an external irritant, we could not have a better

example than this ; and we can hardly have a doubt that the abscess and ulceration which follow are the consequence *not* of ordinary inflammation but of the abnormal generation of gland-tissue and the subsequent softening and decomposition of the neoplasm. I have at present under treatment a case identical in appearance with the present, but in which the enlargements are not the consequence of cutaneous irritation, but of the syphilitic cachexia.

No. 396 is a model of the arm, showing a blotch of eruption on the metacarpus of the thumb and first metacarpal space, and a line of inflamed tubercles extending from this blotch upwards to the axilla. The blotch of cutaneous disease is partly covered by a thin squamous crust and partly denuded, and the tubercles are ten in number. The tubercle nearest the inflamed blotch is in a state of ulceration, as also are the second and the third. The fourth has the appearance of containing pus, and is reaching maturity ; the next three tubercles have the dull purplish hue of decline, and are squamous on the summit, while the three remaining are in a progressive stage. In the intervals of the tubercles, particularly on the upper arm, may also be seen a pale ridge indicating a line of deep-seated inflammation and thickening following the course of the lymphatic vessels. A glance at the model is sufficient to show the progress and effects of an inflammation of the absorbents. This disease is termed by Bazin "hydrose adenite traumatique," indicating the presence of tumours of adenoid tissue in the course of lymphatic vessels, and consequent on a local and traumatic cause.

TREATMENT.—In treating of the therapeutics of lymphoma, I cannot do better than adopt the remarks of Dr. Gillot as the basis of my suggestions. We must always bear in mind that the disease, as far as we are at present acquainted with it, is of a constitutional character, with no tendency to spon-

taneous cure; intermitting from time to time, but pursuing its relentless course to a fatal issue. The medicines the most suitable to combat the disease are chalybeates, bark, and general tonics; but our best allies are to be found in a nutritive diet, hot-air baths, and the hydropathic treatment. Trousseau, he observes, recommends the bromioduretted waters both internally and externally, in the latter case in the form of sea-bathing, the Kreuznach and Nauheim baths, and those of a similar nature; and Niemeyer favours the Zittmann treatment, succeeded by hydropathy. Zittmann's decoction would seem to be chiefly useful for its aperient effect; but the powers of the system must be kept up during its use. Locally, he adds, we must have recourse to chloride of lime and carbolic acid to remove offensive odours, and aromatic wine to stimulate the ulcers to a healthy action.

XANTHOMA OF THE SKIN.—From the consideration of a neoplasm identical in structure with the normal tissue of the lymphatic-gland system, the transition is natural to another neoplasm developed in the skin and chiefly remarkable for its yellow colour—a feature which suggests the word xanthoma or xanthic dermato-sarcoma as an appropriate name. Early observers of this peculiar affection appear to have been principally struck by its unusual colour, and to have regarded it as a pigmentary phenomenon of the integument. It is delineated in the plates of Rayer under the name of “*plaques jaunâtres des paupières.*” Subsequently, Addison and Gull have distinguished it by the name of “*vitiligoidea,*” vitiligo-like; vitiligo being a spot on the skin, of a white colour. In those early days of its history it presented itself rather as a curiosity than as a disease; but later researches have conferred on it a somewhat considerable importance, and an objective designation for the disorder has become desirable; hence, a few

years since, I named it xanthoma, and under that name I now bring it to your attention.

When first noticed, it was seen, as Rayer's name implies, in the eyelids, having a symmetrical disposition, generally beginning near the inner canthus, and increasing in its growth towards the outer canthus; sometimes no bigger than the head of a pin, by degrees spreading out into an elongated plate, an inch or more in length, and more extensive on the upper than on the under lid. Sometimes it evinced a decided tendency to envelop the aperture of a follicle, and sometimes the plate to which it gave rise had the appearance of being composed of a cluster of these follicular spots, or the prominence of an affected follicle might be discovered at the border of the plate. These variations of development of the affection early attracted attention, and were signalized by the subjective titles of granular or papular, and smooth or laminated. Addison and Gull named the two forms *vitiligoidea granulosa* and *vitiligoidea plana*; while I myself gave a preference to the terms *xanthoma papulosum* and *xanthoma planum*; the latter, moreover, I distinguished by the word *xanthelasma*, or yellow lamina.

In its invasion of the eyelids the affection is not remarkably rare. I have seen many instances of it in patients who have consulted me for other diseases, and have noticed it in several of my friends, usually recognized as healthy persons. I only remember one instance, that of a young woman, in which it had grown to be of sufficient importance to induce the patient to make application for its special treatment. In reviewing the many cases of this affection which I have seen, I should say that it is more common in women than in men, and most frequently met with in persons of mature age; in fact, at the age when the liver is apt to make itself felt in the pursuit of its daily function. Nevertheless, that it is occasionally found in the young is shown by a

case to which I shall presently have to allude. I may add another observation, namely, that it is generally associated with an acquired duskiness of the eyelids, and often with a dry and wrinkled condition of their folds.

In its papular condition it is very apt to be taken for an enlarged sebiparous gland, and that was the first idea I entertained of it myself; this notion being suggested not only by its size—say, as big as a mustard-seed, and by its light colour, as by its tumid and apparently lobulated conformation. The term xanthoma points especially to its yellow colour, and the tint of colour ranges through every variety of the yellow pigment, from a pale cream to the deepest golden hue. In its duller tints it might pass unobserved, but in its lighter and brighter hue it becomes strikingly conspicuous.

Some cases which fell under the care of Addison and Gull, in which this affection was associated with disease of the liver, suggested a connection between these two disorders, and further researches by other authors have corroborated this opinion; but the precise nature of the relationship between them has not as yet been discovered. The matter is still under consideration, and in time will no doubt be fully explained.

As yet, I have only spoken of xanthoma as it appears in the eyelids, but it has also been found on other parts of the skin, in the mucous membrane of the mouth, on the tongue, at the commencement of the œsophagus, at the bifurcation of the trachea, in the capsule of the spleen, in the subperitoneal tissue, and in one instance beneath the integument of the finger and in contact with the fibrous sheath of a tendon. A favoured locality is the convexity of the joints, particularly the elbows; and another favoured locality the palm of the hands. It is chronic in its course, lasting for years, perfectly painless, and has not yet been seen in a state of ulcera-

tion. One writer on the subject speaks of a little pruritus; and another mentions soreness when the parts were pressed, as when, being situated on the hands, the patient required to make rough use of a scrubbing brush; but these were both extreme cases; a puncture through a large and prominent papula of xanthoma situated on the arm of one of my patients displayed two very important pathological features of the disease, namely, that in the first place the little tumour was firm and fleshy in texture, and secondly, that it was traversed by the ramifications of blood-vessels; no doubt therefore any longer existed of the seat of the disease being the corium, and secondly, of its being a neoplasm developed in that situation, while the researches of other inquirers have ascertained that it is composed of an areolo-fibrous network enclosing areolæ filled with an accumulation of cell-germs and fat. Dr. Frank Smith, of Sheffield, observes, "I likened it to a minute vascular fibro-cellular tumor."

In intimate structure it was shown by the microscope that "the cuticle was hypertrophied to nearly twice the thickness of that covering the adjacent skin. The rete mucosum was hypertrophied to about the same extent, and was stained with a yellow colouring matter soluble in ether. The corium, also hypertrophied, made up the rest of the tumour. The corium was densely corpusculated, the corpuscles of irregular shape and size, non-nucleated, apparently consisting of connective-tissue germs; but on soaking the tissue in ether about half of them disappeared, still leaving a great number of irregularly-shaped granules in the meshes of the areolar fibres." Dr. Murchison on the same subject remarks that he "found the cream-coloured patches to be due to the deposit in the cutis of a large quantity of oily granules, both isolated and aggregated in masses, and always most abundant in the neighbourhood of hair-follicles. The epidermic cells

were not affected; the oily matter was in such quantity, that when the skin was put in water, the oil ran out from it like a milky fluid."

From these facts we may conclude that the xanthoma is a neoplasm developed in the connective tissue of the skin in close proximity with the follicles; that its component elements have a special tendency to the appropriation of the hæmatoidin of the blood, and fat; and that, to these substances may be attributed its peculiar colour.

In our dermatological collection we have several interesting examples of this curious affection:—

No. 400 is a water-colour study of *xanthoma palpebrarum*; a considerable difference will be observed in the tint of colour of the two figures, one being orange-yellow, the other primrose-yellow; in one, the character of the morbid growth is that of a smooth lamina—*xanthelasma*, *xanthoma laminosum*, *vitiligoidea plana*; in the other the principal patch is composed of small tubercles—*xanthoma papulosum*, *vitiligoidea granulosa*; while in both, the tubercular character is illustrated as distinct from the stratiform or laminated character of the affection.

No. 401 is a model of the left hand, palmar and dorsal surface, of a lad, aged 16, affected with *xanthoma*, or, as termed by Bazin, under whose care the patient was treated, "molluscum cholesterique." On the palm of the hand the xanthic substance is chiefly apparent in the grooves of flexion, where it forms streak-like laminae, while on the thumb it possesses the tubercular character. On the dorsum of the hand small tubercles are scattered on the surface, but are collected most numerous about the knuckles.

No. 402 is a model of the buttocks of the same patient. The convexity of the nates is thickly studded with small tubercles, some red, but the greater number of a yellow colour, while in the fissure of the nates over the coccyx may be seen an

oblong stratiform band. The hyperæmic condition of many of the tubercles is deserving of attention, as showing the presence of an inflammatory impulse of growth. The patient was a clerk, of diminutive stature. His parents and brothers were healthy, and until the present attack he himself had been the same. He was admitted into Saint Louis on the 5th of April, and quitted it on the 29th of May; he was consequently in hospital seven weeks. For five months previously to admission he had complained of a dull pain in the right hypochondrium, and had suffered from jaundice and indigestion. These symptoms were present during his stay in the hospital, and his liver was found to be enlarged and to project for the breadth of two fingers below the margin of the cartilages of the ribs. During the same period small lemon-coloured tubercles of the size of millet-seed had appeared on different parts of the body, while latterly the tubercles had become larger and more abundant. Along the borders of the grooves of motion of the hands they were especially evident, and in that situation had become confluent, so as to form broad yellowish tracks. When divided by incision, the tubercles were ascertained, by means of the microscope, to be outgrowths of the derma stratified with numerous bile-coloured lamellæ.

No. 403 is a photograph of the hand of a woman, aged 28, whose case is reported by Dr. William Frank Smith, of Sheffield, in the "Journal of Cutaneous Medicine," vol. iii. page 241. The palmar surface of the hand, and especially of the fingers, is covered with closely-set tubercles, rounded on the summit, and resembling the projection of shots under the epidermis. The tubercles, which appear to be of the size of the hemisphere of a mustard-seed and somewhat larger, have a tendency to range themselves in the direction of the folds of the skin in close proximity with the lines of motion, and in

the latter position there is a tendency to the fusion or blending of the yellow tissue, so as to constitute streaks or plates. The patient was delicate in constitution, and had had six miscarriages: the last of these events occurred five years back, and was succeeded by jaundice, the jaundice remaining permanent ever since. The xanthoma first appeared on the eyelids in the form of white lines, and the white lines were subsequently "transformed into smooth, slightly elevated patches, yellowish-white in colour," while at the inner angle of the lids might be seen a few small white tubercles. At a later period the xanthic tissue made its appearance, in succession, on the hands and feet, elbows, knees, hips, clavicles, and gums, and had a general symmetrical distribution; the forms under which it presented itself being lines and ridges, laminae, and papulae or tubercles.

No. 404 is a plaster cast of the right hand of the same patient.

No. 405 plaster cast of the right hand (duplicate) of the same patient.

"On the hands the eruption first made its appearance in the form of yellowish-white lines, slightly elevated, corresponding with the flexure lines on the palmar surface of the phalangeal joints and along the flexure lines of the palms, mapping out these furrows in a curious manner. The intervals between the phalangeal joints are occupied by elevated yellowish tubercles having the aspect of small-pox pustules; . . . these tubercles are scattered over the whole of the palmar surface as far as the wrist-joint. On the dorsal surface they are confined to the fingers." The large and prominent tubercles on the joints of the phalanges, particularly the last, are very remarkable, and not less so are the prominent tubercles in the palm of the hand, while on the convexity of the last phalangeal joints they form prominent and extensive tubercular masses.

The photograph and casts were presented by Dr. William Frank Smith.

Through the kindness of Dr. Frank Smith I am enabled to report the sequel of his case. The patient was under his observation for seven years, namely, from 1865 until the time of her death in 1872. The date of publication of the narrative of the case and of taking the photograph and casts was 1869. Two years later, that is, in 1871, the jaundice and emaciation were as great as ever; she had experienced another miscarriage, with copious hæmorrhage; the whitish-yellow streaks on the hands had almost disappeared, and the tubercles had considerably decreased.

In the following year, 1872, she died from "hæmorrhages into, and out of, every cavity of the body; menorrhagia, hæmoptysis, hæmatemesis, hæmaturia, bleeding from the gums,—a true purpuric condition of the blood." After death, the jaundice and emaciation remained prominent features; the morbid growth in the eyelids was as evident as ever, but on the rest of the body the streaks and tubercles had subsided and faded more conspicuously than in 1871. The liver was enlarged, of a brownish-red colour, mottled, smooth, tough, and weighed about five pounds. Its section was brown with cream-coloured oval spots about one-thirtieth of an inch long; and these oval masses were composed of cells and fibrous tissue; the former, about the size of lymph-cells. The brown portion consisted chiefly of fibrous tissue; there were no hepatic cells, and scarcely a trace of the normal structure of the organ. The liver juice contained nothing but the round cells already mentioned and tyrosine. The substance of the spleen was a mere sanguineous pulp, composed of red and white blood-corpuses, crystalline matter, and broken-down tissue. The kidneys were extremely congested, but not altered in structure.

The morbid state of the liver, Dr. Smith observes, is perfectly sufficient to explain the jaundice of several years' standing, the emaciation of the patient consequent on the absence of fat, and the hæmorrhagic phenomena which have been already recorded.

Another interesting example of this disease was recently (January 20th) communicated to the Pathological Society of London by Dr. Wickham Legg. The patient, a man, had been jaundiced for twelve months, and after death the liver was found to be extensively diseased; it weighed nearly nine pounds; it was green, mottled with yellow, in colour; tough and slightly granular; and contained three hydatid cysts. Other hydatid cysts were found in the recto-vesical pouch, and in the omentum. Xanthelasma was met with on the tongue, in the œsophagus, and in the subserous tissue of the peritoneum. On the tongue it was distributed somewhat symmetrically on either side, in blotches ranging in size from half to three-quarters of an inch. And, it may be noted, that although the xanthic neoplasm has been seen on the gums, as in Dr. Frank Smith's case, it was met with for the first time in the mucous membrane of the tongue in this case.

TREATMENT.—In considering the therapeutic management appropriate for xanthoma, we have to bear in mind that the pathological growth in the skin is an aberration of nutrition due to some state of disorder of the organs engaged in assimilation and sanguification, and in this respect corresponds with that of the heterotopical production of lymph-adenoid tissue. Our first attention, therefore, must be given to the improvement of the general health, with particular reference to the organ which may be supposed to be faulty,—in this case the liver and possibly the spleen, and only as a secondary indication to have recourse to local treatment.

The medicines the best suited for the constitutional treatment are: gentle mercurial purgatives; the iodide of potassium with taraxacum; and nitromuriatic acid with bitter infusions. After the excessive loss of blood accompanying miscarriage, Dr. Frank Smith found the xanthoma on the hands and limbs paler and less prominent; but on the more vascular regions of the skin, the eyelids, which are likewise more directly in relation with the organic system of nerves, no impression was produced.

For the local treatment, the remedies which I have myself employed are: frictions with the nitrate of mercury ointment, and pencilling with the tincture of iodine. Both these applications require to be used with care, in consequence of the near proximity of the eye; and the same circumstance prohibits the use of more powerful remedies, lest they should, by inadvertence, creep into the eye and thereby produce pain and inconvenience. Otherwise, there can be no doubt that the destruction of the neoplasm by every means that will accomplish that object would be the most effectual local treatment, while the internal treatment was aimed at the removal of the cause, and the consequent prevention of extension of the morbid process.

EPITHELIOMATOUS AFFECTIONS.—Assuming defective vitality and perverted nutrition to be the correct pathological expression for dystrophic affections in general, the transition from scrofula to cancer is so evident as to require no laboured illustration. In both, the lowered vitality of the tissues is an essential cause, and, although the diseases themselves usually exist independently, the presence of one or other in the parent stock may determine either in the descendants of that stock. I have already adverted to this fact in discussing the etiology of lepra, seeing that that disease may be traced indifferently to phthisis or cancer as its origin. Neither do we find the pathology of those affections essentially

different, for in both the substitution of low vitalized tissues for those of a higher type is the principal characteristic.

The simplest of the forms of cancer met with in the integument is that which is termed *epithelioma*, which consists in the proliferation and growth of cells having the type of the epithelial cell, in the superficial stratum of the corium, and in such number as to push aside and produce absorption and ulceration of the corium. These abnormal growths generally make their appearance beneath the epithelial lining of the follicle, producing a small, semitransparent, cartilage-like nodule, which projects as a pimple or tubercle. At this early period the small tubercle may be recognized as an abnormal production of epithelium, and its anatomical seat may be proved by the indentation at its centre, corresponding with the aperture of the follicle. The tubercle is remarkable for the slowness of its growth, persisting for years, and hardly attracting the attention of the patient. As it grows, it assumes a lobulated figure, is depressed at the centre, and small venules may frequently be seen in the interlobular grooves, and forming a loose ramification through its structure.

For a long time there are no local symptoms whatever marking its presence; there may be observed a slightly tingling sensation; neither is there any redness surrounding its base. Subsequently a small crust makes its appearance in the central depression of the little tumour; if the crust be picked off, a slight moisture, resulting from the softening of the epithelial mass, may be seen beneath. Or possibly the patient's attention is first drawn to the affection by discovering a slight oozing of discharge issuing from the edge of the scab or crust. By this time it may have attained the bulk of a split pea and may measure a quarter of an inch in diameter.

Another reason for the epithelioma attracting so

little attention is that it is generally solitary, and it is but rarely that several are to be found in the skin. The habitat of the disease is the face, most frequently the nose, often the cheek, and occasionally the neighbourhood of the eyelids. It must not, however, be supposed that it rises upon a healthy skin. The dermatologist will discover many indications of an unhealthy tissue even in the young; while in the adult and in the elderly there is evidence of a languid condition of skin—the capillaries developed here and there into a coarse network, the follicles dilated with epithelial exuviæ, and the colour of the surface yellow and grey.

After a while the whole of the original transparent cell-tissue is removed, and an ulcer with thickened edges, and moist, smooth, yellowish base, is presented to view. From time to time the exuded secretion dries up and forms a thin crust; and at other times the crust is removed, displaying the indolent and languid ulcer already described. The edges are hard as well as prominent, retaining the cartilage-like transparency of their early development, and the integument surrounding the border is purplish in tint, and frequently puffed by serous infiltration.

The epithelial transformation is thus propagated from the morbid surface in every direction, outwards into the neighbouring integument and more or less deeply into the tissues at its base. When it creeps along the surface it constitutes a true *herpes esthiomeros* or herpes exedens, or rodent ulcer. And when it sinks into the tissues at its base it is capable of penetrating even to the bone, and destroying all the structures which oppose themselves to its progress.

It may be mentioned here, by way of parenthesis, that this is the third rodent ulcer or herpes exedens which has come recently under our notice; the first of these being a syphilis, the second a struma, and the third to all appearance a form of cancer. It

behoves us, therefore, to be precise in our definition when speaking of these diseases, and equally precise in our language. For, while the first will yield to a treatment with the iodide of potassium; the second may be allowed to take its own course without prospect of danger; and the third may prove fatal unless arrested and destroyed.

We may also take into our consideration here the peculiarity just mentioned of a tendency in some instances to progression in depth and in others to progression in breadth by creeping along the surface. In the latter case the ulceration would seem to content itself with cropping off the more highly organized corpus papillare from the fibrous network of the corium and healing as soon as that effort is accomplished, so that the disease will present the appearance of an extensive cicatrix like that of a burn, but entirely healed, while the border surrounding the cicatrix is in a state of slow ulceration; the epitheliomatous growth still extending itself, still spreading into the neighbouring sound skin, and then falling into a state of softening, decay, and ulceration. In some instances this tendency to peripheral growth is one of the chief dangers of the disease, as when the neighbourhood of the eyelids is attacked. I may also note that I have seen some few distressing cases where this propagation by the surface was unaccompanied with the healing process, where the exposed ulcer remained permanently open, where the cancer was insatiate, and where the condition of the patient was pitiable in the extreme, only relieved by our mortal enemy, and sometimes welcome friend—Death.

Our illustrations of epithelioma are not numerous, but they demonstrate very fairly the pathognomonic appearances of the skin.

No. 406 is a model of the side of the face and head of a man, 34 years of age, showing cicatricial patches surrounded by a prominent margin; the

disease presents the usual pathognomonic character of a superficial and serpiginous epithelioma, the herpes esthiomenos of ancient authors and herpes exedens or impetigo rodens of the moderns, but is named by Hillairet "lupus acnéique." It began behind the ear at the age of 27, and at that time resembled a violet-tinted cicatrix, wrinkled on the surface and irregular in outline; three years later the patch in front of the ear made its appearance, and more recently the smaller patch at the side of the nose. The affection was attended with itching, but never with pain; there was no obvious ulceration, and at the time of his quitting the hospital the larger patches were progressing towards cure.

No. 407 is a model of the face of a man, 45 years of age, showing two superficial cancerous sores, one situated on the nose, near the inner angle of the eye, the other at the commissure of the mouth, involving part of the upper lip and cheek. The margin of both sores is prominent; that of the larger one has a pale rounded border, and immediately beyond this border a narrow purplish areola; the surface of the sores is smooth, devoid of granulations, and partly coated with a yellowish transparent lymph. The patient's mother died of phthisis; he himself was a tailor by trade, and the disease began near the angle of the mouth at the age of 33, commencing by a small prominence, which became alternately excoriated and encrusted several times. The smaller sore on the nose bled upon slight injury; there was no affection of the lymphatic glands, and the ulcers were healed by means of chloride of zinc. The man was under the care of Lailier, who terms the disease "cancroide."

At the present day the term "cancroide," that is, like a cancer, hardly meets the requirements of science. A given disease, such as the one in question, either is a cancer or it is not; it does not present the ordinary characters of struma or lupus,

and it is more evidently not a syphilis, but, as its name implies, it approaches an epithelioma more nearly than either, just as we found in studying the strumous affections a like difficulty of diagnosis between irregular forms of struma and lupus, and between the forms of lupus itself.

No. 408 is a water-colour study of a nose deformed by a partially healed *epithelioma*. Across the root of the nose and at the inner angle of the eye the morbid surface is bounded by a rounded, prominent, and nodulated border; at the inner angle of the eye the nodules form a small cluster, and proceeding downwards from this point is a brownish scab concealing a superficial ulceration. Several small yellow scabs are likewise seen on the nose, together with a plexus of minute veins. The patient was a man, 62 years of age, and the disease had been in existence for six years at the time the drawing was made. There had been no pain, only a moderate degree of itching, and there was no enlargement of lymphatic glands.

No. 409 is a coloured photograph, showing the havoc committed by cancer in the destruction of the greater part of the external ear and subjacent tissues. The rounded, whitish, and semitransparent border peculiar to *epithelioma* is seen along the inferior border of the ulceration.

The patient in this case was a letter-sorter in the Post-office, and was 49 years of age when the photograph was taken. The disease at that time had been fourteen years in existence; it began as a pimple on the cheek, and thence spread slowly backwards to the ear. Having attacked the cartilages of the ear it made rapid progress, and burrowed deeply into the tissues surrounding the external carotid. He died shortly after the photograph was made. His medical history afforded no explanation of the cause of the disease; he had enjoyed good health during the greater part of his life; his parents were alive

and well; and of four brothers and sisters, two of the former were healthy, one died of pneumonia, and a sister, of phthisis.

No. 410 is a water-colour study of *epithelioma* affecting the aperture of the nares and upper lip. On the bridge of the nose are seen two prominent tubercles, each covered with a thick brown crust. The edge of the right ala nasi is occupied by a large, rounded, semitransparent callous mass, and from this mass there descends a prominent border to the prolabium of the upper lip. The patient was a woman, upwards of 60 years of age.

No. 411 is a model of the face, presenting a remarkable example of cauliflower-like cancerous growth (*epithelioma*) affecting the lips throughout the whole circumference of the mouth. The patient, a man, 76 years of age, was under the care of Dr. Dolbeau, in the Beaujon hospital at Paris. The disease had been in existence for several years; it produced constriction of the orifice of the mouth, and prevented the movements of the jaw; nevertheless the man's general health remained unaffected, and there was no enlargement of lymphatic glands.

The model 412 introduces us to a form of disease different from epithelioma, which is probably encephaloid cancer, but which might possibly turn out to be merely a fibrous-tissue tumour. Without having the patient before us, to learn her antecedents and subsequent history, it is difficult to decide the question; but, taken in conjunction with a subsequent case, I am disposed to conclude that the disease is undoubtedly encephaloid cancer.

The model is that of the arm of a woman, exhibiting four flattened tumours embedded in the skin. M. Lailier, who had charge of the patient, calls it "éruption indéterminée chez une femme diabétique." The tubera range in size between half an inch and one inch in diameter. At an early stage they present a white tuberosus spot very slightly raised, circular

in figure, and depressed in the centre; the white tuber being bordered by a halo of a dull purplish hue, and the depressed centre enlarging and acquiring a reddish colour. The reddish central depression is the seat of ramification of a few minute venules which converge from the white portion to a small venous trunk that sinks in the centre into the deep tissues of the skin. The central depression has, therefore, the appearance of a vascular area surrounded by a white border, and the latter by a lilac areola. Between the two upper tubera is a dull red spot that probably represents the earliest stage of the growth, and is smooth in the centre, as though the white tissue were in process of formation. If this be the fact, the pathological process may be stated as follows: a congested spot, becoming white in the centre from the formation of a new tissue, and retaining its redness at the circumference; secondly, the penetration of the white tissue into the surrounding congested halo, the centrifugal extension of the latter, and an alteration of structure of the white substance of the central area by which it becomes reddish in colour and possibly consolidated in texture. All this looks more like cancer than any other disease of the integument with which I am familiar.

The case to which I now refer in illustration of that before us, I have termed anomalous ulcerative tubercular eruption. It is represented in the photographs, Nos. 413, 414, and 415, and a portion of the integument taken from the upper part of the left thigh is preserved in preparation 2270 B, having been presented to the College Museum by our late distinguished Fellow, Thomas Nunneley, of Leeds, by whom it was regarded as an example of *elephantiasis Græcorum*.

No. 413. The patient, a man, aged 48, was admitted into hospital in December, 1868, and died in February, 1869. In the anterior view of his body several ulcers are seen on the breast and shoulders,

and one of large size on the right thigh. In the posterior view five ulcers will be observed on the right side of the back, and a large ulcer on the right thigh.

No. 414 is a photograph of the same patient taken two months later than the preceding, and a fortnight before his death. The tubercles and ulcers have made a rapid increase both in number and size, and the ulcer on the thigh has acquired very considerable dimensions.

No. 415 is a back view of the patient taken at the same time, showing numerous and extensive ulcers on the back as well as upon the arms and thigh. In all the figures the exactly circular figure of the ulcers is noteworthy, as also the prominent border by which the ulcer is surrounded.

Mr. Nunneley, unfortunately, has left behind him no history of this case, but it must be obvious that it is not one of elephantiasis. It belongs very probably to the group of encephaloid tumours, and is sufficiently remarkable to deserve as complete a description as can be given from inspection of the preparation. The first point that strikes the attention on a close examination of the preserved portion of skin is, that the tumours and ulcers are entirely superficial, that they are confined to the surface of the derma, and that the morbid degeneration of tissue and ulceration do not penetrate the corium. The surface of the skin is coarse and pimply, an exaggeration of cutis anserina, suggesting the idea that the hair-follicles, and possibly the sebiparous glands, are in a state of hypertrophy. Next, it is seen that the skin is studded with tubercles, amounting to between forty and fifty in number, and that the tubercles range in size from about one quarter of an inch to an inch and a half in diameter, the greater number of the tubercles being intermediate in breadth between these two extremes, and their elevation not exceeding two lines. The smallest of the tubercles

are evenly convex in figure, few in number, and smooth in the centre. In some of these, a little more advanced, a group of three or four follicular prominences form a kind of papula on the summit of the tubercle. The papula undergoes a change of colour, assumes (in the preparation) a buff-coloured tint, and becomes surrounded by a slightly prominent border, which runs through similar phases. Then another prominent annulate border makes its appearance exteriorly to the preceding and within the limit of the tubercle itself. At this stage the appearance of the tubercle suggests the idea of the iris; there is, first, the buff-coloured centre, then a circle around it, also buff-coloured, but of a different tint and more or less puckered, and beyond that the prominent and nodulated border constituting the circumference of the tubercle. And this may be regarded as the mode of growth of the tubercle, namely, by the propagation of the morbid process by centrifugal enlargement, and by the successive development of fresh rings around those previously formed. In the next place we may observe that the buff-coloured change in the appearance of the centre of the tubercle denotes a process of degeneration and softening, and that after the discoloration has reached the outer border of the second ring, the discoloured portion is apt to separate around the edge, and the edge becomes raised and loose, and assumes the character of a slough; and a further extension of this process of degeneration, softening, and sloughing gives rise to the circular ulcers which are so remarkable in appearance, and of which several are seen in the preparation. It will be seen also that the ulcers are quite superficial, and that their apparent depth results from the prominence of the rounded border of the tumour which forms their boundary. This boundary wall is vertical towards the cavity of the ulcer and sloping towards the surrounding skin. The pathological process now

described is evidently unlike the ulceration of syphilis or elephantiasis. Another preparation No. 2303, described as a portion of the integument of the thigh affected with medullary tumours, would seem, however, to throw some light on the subject. In it there will be seen the same circular, flattened, and umbilicated tumours, and the same general pathological physiognomy.

TREATMENT.—Of the cases of epithelioma or canceroid which are submitted to us for treatment, the majority may be said to be local, and to call for an immediate recourse to local measures; and those measures are to be directed to the one purpose of removing or destroying the morbid neoplasm. In a considerable number of instances the caustic affords a ready means of obliterating the disease. For many years past I have used a solution of caustic potash for this purpose; the strength of the solution being equal parts of potassa fusa and distilled water, and, occasionally, a stronger solution, namely, two-thirds of the caustic to one of water. I have always found these solutions perfectly efficient and very manageable, inasmuch as they admit of easy application by means of a small sponge brush. But the reasons which especially influence me in their selection are their comparative painlessness and the complete cessation of pain at the end of a few minutes. One application is often sufficient to destroy the disease, but sometimes the ulcerated surface refuses to heal, and the morbid growth evinces a tendency to return, and then a second application must be made at the end of a fortnight or three weeks; and, if necessary, repeated subsequently.

The immediate effect of the caustic is to convert the diseased tissue into a black gelatinous mass, which should be left to dry on the surface. It then desiccates into a scab, which falls off spontaneously at the end of twelve or fourteen days, leaving in its place a healed cicatrix. Should there be left behind

any trace of an ulcerating surface, the caustic must be reapplied immediately; or, should any white and transparent nodules be seen at the borders of the cicatrix, this, likewise, would be a reason for the immediate reapplication of the remedy. But, as a rule, it is well to leave the spot to itself for a few weeks, and then to examine it carefully to be sure that all the morbid tissue is gone. This precaution is rendered needful from the fact that the tendency to reproduction of the disease is apt to remain in the immediately adjacent tissues, and the impulse to growth might occur at any subsequent time.

Where the epithelioma is small, not exceeding half an inch in diameter, no dressing is required after the operation; the glutinous jelly produced by the action of the caustic on the tissues and blood is the best dressing the sore beneath could receive. But sometimes, for the sake of appearance, and when the morbid surface is of greater extent, a piece of pink blotting-paper gently laid on the surface of the gelatinous mass will form a very complete and sufficient dressing.

As the purpose of the treatment is simply the destruction of the neoplasm, *tuto, cito, et jucundè*, other surgeons might give a preference to different means; for example, the galvano-caustic, the mineral acids, the pernitrate of mercury, or the chloride of zinc. I should hope that no one would select arsenic, for the dangers it might possibly entail place it out of the question as a remedy of modern times. I am, however, bound to report that I believe the *potassa fusa* to be superior to all other chemical remedies, and especially so for the rapidity of its operation, the moderate pain it occasions at the time, and the rapidity with which that pain ceases entirely. Were the galvano-caustic more easy of access, it would probably supersede every other remedy.

There may, likewise, be some cases, and also

some operators, and, perhaps, some patients, who would prefer the knife as a ready and, due honour to chloroform, a painless mode of extinction of the disease; and, all willing, there is little to be said against it. Our cancerous subjects necessarily have a faulty constitution, and may not bear the effects of chloroform particularly well; and in other cases the dread of the knife would seem to produce on the system the effects of a nervous shock. I can conceive individuals, even of delicate organization, who could bear severe and long-continued pain without harm, who would succumb to the dread of the painless knife.

We must also not forget to recognize the possibility of the disease presenting a large surface, a foot or more in extent, in which case the application of a caustic to the whole might be too dangerous to attempt. But in this instance we are not precluded from taking a portion at a time until we have at last included the whole. Here is a case in which the knife becomes useless, but in which the cautious use of the caustic might lead to a successful issue. In these cases dressings with laudanum are expedient and useful, as also are dressings with the compound tincture of benzoin.

Chlorate of potash has been recommended both as an external and an internal remedy in cancrioid ulcers, and has been somewhat vaunted as a cure. I have met with few instances in which to give it a trial, and I cannot agree with those who have praised it so highly. In all cases of moderate extent the caustic should be used immediately, and, consequently, no opportunity is given for the trial of a remedy which requires for its application an ulcerated surface remaining open for a considerable space of time. The chlorate of potash has been recommended as a lotion, likewise in combination with honey in the proportion of one part to three, and

internally in doses of ten grains twice or three times a day.

It must be borne in mind that, in dealing with cancer, we have brought under our consideration a morbid diathesis which has its seat not only in the skin but in the general system: a diathesis which has a tendency to develop a cachexia. Therefore, in this as in the dystrophic diseases already passed in review, a therapeutic treatment which shall have for its object to regulate function and improve nutrition is equally necessary. Healthy hygienic conditions and food are of especial value, and so likewise, are medicines directed to the same purpose; among which may be ranked codliver oil, either alone or with phosphorus and iron; iron with quinine; the perchloride of mercury with bark; the iodide of potassium; chlorate of potash; the mineral acids with bitters; and arsenic with iron.

One of the most painful cases of cancer of the skin which it ever fell to my lot to observe was that of a lady of advanced years, who had been remarkably abstinent in food, and particularly in meat and wine, during her whole life. It may be said that she had passed through life without an illness, to be struck down by cancer at the end. Reading her medical history in her countenance, we could perceive a strong and able spirit included within the prison of a starved organization. Her body was attenuated, her powers of nutrition and maintenance of existing structures were of the feeblest kind. The demands of the higher tissues were met by the supply of the lowest; the germs of connective tissue uncontrolled, ran into a proliferating and, as it were, a parasitic form of growth; the weeds flourished while the body decayed, and the efforts of life to sustain them brought in their train dissolution and death.

LECTURES ON DERMATOLOGY.

SESSION 1875.

LECTURES ON DERMATOLOGY.

MR. PRESIDENT AND GENTLEMEN,

THERE are three functions of the skin which more than any others govern its health and well-being; they are its *circulation*, *nutrition*, and *innervation*. When these three functions are properly performed and normally balanced, the state of the organ may be said to be one of health; whilst aberration of one or more of these functions constitutes disease.

Circulation in excess gives rise to inflammation, which is typified by eczema; perverted *nutrition* is the source of dystrophy, atrophy, and hypertrophy; and disordered *innervation*, of prurigo and dermatalgia. A careful examination of the skin will, therefore, enable us to determine a diagnosis, whether it be inflammation, abnormal nutrition, or neurosis, and direct us to the appropriate therapeutical treatment.

Common inflammation of the skin is best illustrated by eczema, including impetigo, as also by erythema, pemphigus, and anthrax or boil. But when inflammation is excited by a specific poison it is termed "specific inflammation," and under this head are comprised the exanthemata; namely,—rubeola, scarlatina, and small-pox, and the eruptive manifestations of syphilis and elephantiasis Græcorum.

It will be easily conceived, however, that derangement of any one of these important functions may be the means of involving one or other or both of its companions in disorder; hence the frequent association of pruritus and neuralgia, and likewise of

hypertrophy with eczema, and the well-known correlation of herpes and neuralgia.

Altered sensation of the skin may present itself independently, as hyperæsthesia, anæsthesia, and dysæsthesia; or may be the distressing accompaniment of altered circulation, sometimes doubtless the cause and sometimes the effect of altered circulation.

But a more extensive range of variety is presented by altered nutrition, in which, besides simple atrophy and hypertrophy of normal structures, we meet with dystrophy or perverted nutrition, resulting in degeneration of tissue.

I have already, in the course of these Lectures, traced the pathological history of lepra, struma, lupus, lymphoma, xanthoma, and epithelioma, in all of which diseases the degree of aberration of the functions of nutrition and circulation is so nicely balanced that it would be difficult to assign to each its exact place among the pathological phenomena. Sometimes these affections begin with inflammation and afterwards assume the dystrophic character, and at other times the nutritive changes have made a considerable advance before any inflammatory conditions can be distinguished. Thus, if we take the common lepra of the Greeks we have an illustration of a low form of inflammation operating on an inherently weak tissue, and giving rise to hypertrophy of the papillæ cutis, and likewise of the epidermis. The same may be said of struma, lupus, lymphoma, and epithelioma, in all of which also three factors are present,—a weak tissue, an accumulation of blood in the capillaries, and an abnormal cell-growth, the latter tending in the direction of lymphatic gland-tissue in struma and lymphoma, and in the direction of epithelium-tissue in epithelioma.

I now enter upon the consideration of a group of diseases of which the characteristic features are

defective and excessive nutrition; in the one instance giving rise to a poverty of structure, which at its lowest stage must be termed atrophy, and in the other case to excessive nutrition or excessive growth, in other words, to hypertrophy.

It is not uncommon to find the skin poorly nourished congenitally; that is to say, there is defective circulation rendering the integument paler than natural, deficient innervation reducing its sensibility, and prominently and principally, deficient nutrition, restricting its healthy growth and function; and this state of imperfect development of the skin, like other peculiarities, whether inherent or acquired, is frequently transmitted from parents to their children, and is therefore hereditary.

If we ask ourselves what the pathology of the integument in such a state must of necessity be, we should find the precise conditions that physiology would lead us to expect:—the skin is dry, greyish in colour, wanting in lustre, rough, hard, wrinkled, cracked, and in some parts, as on the cheeks, hands, and feet, stretched, in consequence of being unequal to keep pace in speed of growth with the bony framework of the body. The Fathers of medicine called this state of the skin Xerasia, which means dry or dryness, and many years ago I gave it the name of Xeroderma or dry skin; or we might term it, for similar reasons, and more correctly, dermatoxerasia.

But there are two other features in connection with dermatoxerasia which demand our attention, the one being due to imperfect flexibility of the skin, and the other to sluggish evolution of the epithelium. The whole of the softer and more succulent tissues of the integument are deficient in quantity, whilst the harder and denser tissues, the epidermis and white fibrous tissue, are in excess, and fat is not only absent from the corium but likewise from the subcutaneous connective layer; hence it

happens that in the movements of the body, instead of the natural suppleness and flexibility which impress on the surface that peculiarly figured network which is known as the lines of motion of the skin, the creases are abnormal in figure, and the *areæ* between them larger than natural, particularly on the internodial portions of the limbs. The cuticle covering these *areæ* is generally smooth, frequently shining and lustrous, and broken at the creases, where it forms a rough edge, giving rise to the roughness of epidermis which is common in dermatoxerasia, and likewise to the idea of scales. Hence, in Willan's time, dermatoxerasia was regarded as a scaly disease, and a place assigned to it in the group of "squamæ."

The appearance denominated "scales" is, therefore, in reality, simply due to the smooth layer of epidermis which occupies the *areæ* of the abnormal lines of motion of the dry and stiffened integument; but these *areæ* presenting a rude regularity of figure, would seem to have suggested to the imagination of our forefathers an idea of the scales of fish; hence, the name ichthyosis, or fish-skin disease, ichthyosis being, therefore, an aggravated form of dermatoxerasia.

To the want of accommodation inflexibility between the integument and the motions of the body, as also to the further want of accommodation between the derma and epidermis, must be attributed the formation of those *areæ* which give figure to the supposed scales; but in certain situations, and notably around the joints where the *areæ* are small, it will be observed that there is an accumulation of epidermic matter which is partly due to the density of the epithelial substance—epidermic and sebaceous, and partly to defect of normal desquamation. Hence, in some situations the so-called scales are large, lustrous and thin, and in other situations they are small, grey, thick, and rugged, and between these extremes they present every degree of variation.

We have in our collection nine objects, illustrating this form of dermatoxerasia termed ichthyosis.

No. 416 is a coloured lithograph, showing the legs and feet of a little girl, aged between 5 and 6, who had evinced this affection, resulting from defective or perverted nutrition of the skin, since the age of eighteen months. The wrinkles about the knee, the areolated tracery on the legs, the brown bands crossing the front of the ankle and dorsum of the foot, the thickening of the epidermis of the sole, with the desquamation at the edges of the latter, and the fissures of the borders of the foot, are pathognomonic signs of ichthyosis.

No. 417 is a water-colour study of *ichthyosis* in the same little patient, representing the appearance of the dorsum of the foot, the sole of the foot, and the outer side of the knee with part of the leg.

No. 418 is a plaster cast of the right forearm and hand, its dorsal aspect, from the same patient. The pachydermatous character of the integument of the fingers and the position of the knuckles of the metacarpo-phalangeal articulations in relation to the dorsum of the hand, are very remarkable. The thick wrinkled folds on the back of the wrist are also deserving of notice.

No. 419 is a plaster cast of the anterior aspect of the left forearm and hand of the same patient. The length of the palm, the apparent rigidity of its integument and the absence of its normal markings, are very striking.

No. 420 is a plaster cast of the knee, its inner aspect, with the adjacent portion of the thigh and leg, from the same patient. The cross pattern on the thigh, produced by the lines of motion, is very curious. The coarse wrinkles around the joint are strongly marked, and over the hamstring are seen some prominent ridges, coated with a thick, rough, epidemic accumulation of horny texture.

No. 421 is a plaster cast of the inner side of the

leg and sole of the foot of the same patient. The points to be chiefly noted are, the wrinkled condition of the integument, the state of desquamation of the epidermis of the sole, the length of the sole, and the shortness and insignificance of development of the toes.

No. 422 is a plaster cast of the outer side of the left leg of the same patient. The integument is very considerably wrinkled above, in the neighbourhood of the knee, and again at the ankle and on the dorsum of the foot. The skin of the leg is smooth and studded with follicular prominences, and the general aspect of the integument suggests the idea of attenuation from deficient nutrition. The epidermis along the border of the foot is thickened, and in a state of desquamation.

No. 423 is a plaster cast of the right arm and hand of a gentleman in the legal profession. The integument presents the characteristic coarseness and wrinkled condition of *ichthyosis*; deep grooves on the back of the hand mark out the surface into large angular areae, the integument composing the areae having the appearance of being attenuated and indurated.

No. 424 is a plaster cast of the back of the hand and part of the arm of a young farmer; the coarseness of the integument is very remarkable, and defective nutrition is shown in the clumsiness and crookedness of the fingers. It is necessary to state that the patient was not subjected to manual labour.

The first seven of these objects illustrate the case of a little girl between five and six years of age, in whom the affection was idiopathic. In my "Portraits of Diseases of the Skin"* her state is thus described:—

* Published March, 1849, with the title of "Xeroderma ichthyoides."

“The conspicuous character of the disease is a general dryness and roughness of the skin, modified in appearance in different regions of the body. Thus, on the cheeks and forehead the epidermis is smooth, but presents a number of ragged edges, the result of constant exfoliation. Around the mouth and eyelids, and on the neck, it is rough, and has a mealy appearance (*ichthyosis furfuracea*), and on the rest of the body the breaking up of the epidermis corresponds with the direction and form of the lines of motion of the derma.

“On a close examination of the skin, the pores of the follicles, both sebiferous and capilliferous, will be found to be prominent, from the accumulation within them of a dry, hardened substance, of which a portion often projects beyond the level of the aperture. This desiccated substance is the epithelial product of the follicle, altered in its character from the absence of its oleaginous element. The hair undergoes a similar alteration to that of the sebaceous product; it is either wanting altogether on the affected limbs, or is dry and brittle, and broken off to a level with the skin.

“A mere glance at the skin affected with xeroderma shows the dependence of the disease on a state of defective nutrition of the cutaneous tissues. This is always least conspicuous on the face, but is very apparent on the limbs, and particularly on the arms; and there is besides a marked deficiency of subcutaneous adipose tissue. The integument is sometimes thinner and sometimes thicker than natural, and either soft or hard. When soft, it may be pinched up from the parts beneath in a remarkable manner, and in the different movements of the limb is thrown into folds, which have more the character of a loose vest than a part of the body. When the skin is hard, it cannot be pinched up, but it may be moved backwards and forwards upon the subcutaneous fascia, as if there were no binding tissue between the under

surface of the corium and the structures beneath; and instead of falling into folds during the movements of the body, it seems to depend entirely upon the lines of motion for its power of adaptation to the movements of the joints. The lines of motion are, therefore, very strongly marked, and form deep grooves, while the inflexible areae are large and smooth. The softer condition of the skin is most frequently met with on the neck, the limbs between the joints, the flexures of the joints, and the trunk of the body; the harder condition on the hands and feet, and the convexities of the joints.

“The subject of the present illustration afforded a good example of the disease. The child was small in stature for her age; her face was polished and moderately full, of a dirty hue, and roughened by ragged edges of broken and exfoliating epidermis. The skin of the rest of the body was dry and wrinkled, and around the joints thrown into folds; looking indeed as if much too large for the body which it contained, or like the parched and shrivelled integument of a person of extreme age and decrepitude. The general tone of colour of the skin was a yellowish grey, but the hands were red; gentle pressure with the finger dispersed the redness to a considerable distance around the compressed spot, rendering it perfectly white, and the colour was slow in its return. The skin of the back of the hands and fingers was thicker than natural, and hard, like parchment, and was divided by deep grooves into large and irregular compartments; this was especially the case upon the knuckles, and every here and there the skin had broken in the lines of motion, and formed deep chaps. The skin of the palms of the hands exhibited the thickening of the derma, the parchment-like yielding of the unpliant tegument, the large compartments, and the deep grooves, more strongly than that of the back, and there were besides deeper fissures and cracks. At the metacarpo-phalangeal

joints the fissures were so deep as to sever the integument completely. There was another singular peculiarity apparent in the hands—namely, a want of proportion in length between the skin and the bones, so that the knuckles of the metacarpo-phalangeal articulation made their projection very near the middle of the hand, as though the metacarpal bones had not grown in accord with the integument, or as though the fingers in their growth had carried with them the integument of the body of the hand. This appearance may be imitated by drawing a glove forward on the fingers and then closing the hand.

“The lower limbs are highly characteristic of the disease. The skin of the knees is thrown into numerous prominent wrinkles, on which the epidermis is harsh, dry, thick, and discoloured, and in certain parts, where the wrinkles are crossed by transverse clefts, resembles ichthyosis cornea. On the sides of the knee, near the ham, a similar structure exists. From the knee to the ankle the skin is smooth, greyish, silvery, and glossy (*ichthyosis nitida*), and in an oblique light might, from its refractive qualities, bear comparison with mother-of-pearl (*ichthyose nacrée*, Alibert). It is marked by a reticulated tracery of white lines (*ichthyosis reticulata*), the lines being occasioned by the loosening and rupture of the epidermis at the abnormal grooves of motion of the condensed skin. The spaces between the reticulations, from their regularity of shape and smooth polish, resemble more or less closely the silvery scales of certain fish: hence the name of the disease; and occasionally, when the reticulations are of small size and irregular, and the centre of each scale thicker and more deeply coloured than its border, the idea of the scales of serpents is suggested (*ichthyosis serpentina*).

“Around the ankle the skin was thrown into prominent wrinkles, and across the instep were three greyish bands, where the epidermis was thicker

than natural, and marked by a number of longitudinal clefts into broken ridges running parallel with the foot. On the rest of the back of the foot the skin formed numerous wrinkles corresponding with the movements of the joints, and along its borders were several deep chaps.

“The soles of the feet exhibited the same peculiarity referred to in the hands—namely, a disproportion in growth between the skin and the bones. This is apparent in the great length of the foot and the shortness of the toes. The epidermis of the under surface of the foot was very thick, yellowish in colour, very much broken, and presented a number of irregular edges. There were upon the borders of this surface several deep and long chaps.”

In the details of this case we find placed before us an accurate picture of the signification of ichthyosis; namely, *first* of all, the polygonal areae included within the abnormal lines of motion of the skin, rudely suggestive of the scale-armour of a fish; *secondly*, the generally smooth surface of the epidermis covering the areae, sometimes white and brilliant and suggesting the idea of mother-of-pearl, the “ichthyosis nitida” and “ichthyose nacree” of Alibert; *thirdly*, the broken edge of epidermis corresponding with the lines of motion of the skin, giving strength to the notion of scales, and leading to the error of regarding ichthyosis as a squamous disease; *fourthly*, looking to the lines of motion apart from the areae, the resulting network which gave origin to the term “ichthyosis reticulata”; *fifthly*, the smaller areae around the joints with their thicker epidermic coverings, suggesting the notion of the scales of serpents rather than of fish, “ichthyosis serpentina”; and *lastly*, the furfuraceous and pulverulent exfoliation on the eyelids, around the mouth, on the neck, and in the flexures of the joints, which has added to an already too numerous list of synonyms, that of “ichthyosis furfuracea.”

We are sufficiently far advanced in our knowledge of the pathology of the skin not to be led astray by these numerous terms, or to be induced to believe that they represent differences in the nature of the affection; but they are, nevertheless, worthy of remembrance as recording variations in character of the appearance of the disease, all of which, as in the present instance, may be met with in the same individual.

Another observation which arises out of the consideration of ichthyosis has reference to the part taken by the epidermis in its separate relations of external and internal, that is, as constituting the superficies of the skin, or the epithelium of the follicles. In its superficial position it is thin, and simply desquamates in the form of transparent laminæ; but in relation to the follicles it is associated with a greater or less production of sebaceous matter. Thus, on the internodial portions of the limbs, the desquamated laminæ are thin and transparent, while around the joints the epidermic crusts covering the aræ between the lines of motion are thick, partly from the presence of an increased quantity of epidermic matter, and partly from the superaddition of sebaceous substance. The affection of the follicles is further shown by the imperfect condition of the hairs, which are more or less twisted or bent, and often brittle, breaking off on a level with the surface of the skin. Moreover, the follicles are projected more or less numerous in the form of hard papulæ, and are more or less obstructed by an accumulated mass of epithelial exuviæ.

We have, therefore, in the next place to consider the form of complication of dermatoxerasia, which would result from an inordinate production of sebaceous substance by the glands and follicles of the integument. The sebaceous matter, in the case to which I am now referring, is not eliminated as an

oleaginous emulsion, and, as such, diffused upon the skin, but is detained within the cells of epithelium, and blended with the cells of the epidermis, and on its expulsion from the follicles concretes and dries on the interlinear areæ, assuming their figure, and increasing in thickness and density until they form crusts of horn-like density. This difference in the pathology of dermatoxcrasia led me some years ago to distinguish between ichthyosis epidermica and ichthyosis sebacea, and to designate the latter by the name of sauriosis, in contradistinction to ichthyosis; the scales of sauriosis being thick and dark-coloured, and more nearly resembling the scales of the saurian reptile or lizard than those of the fish.

No. 425 is a model of the ankle and dorsum of the foot, showing an example of ichthyosis sebacea or sauriosis: the saurian-like scales are most strongly defined along the line of flexion of the joint; they are black from the attraction of dirt from the atmosphere, and the apparently unaffected skin is roughened by desquamation, *dermatoxerasia*. The affection is termed by Lailier "ichthyose noire cornée." The patient was a boy, aged 14, and a brother was similarly affected, but there was nothing of the kind in their parents, and the morbid state of the skin manifested itself in infancy.

No. 426 is another model of the same affection. The disease extends from the shoulder to near the wrist, and is most strongly developed on the finer integument in the neighbourhood of the axilla, whilst it is absent along the line of flexion of the elbow, and upon the wrist and hand. The arm is that of a young person, the integument thin, wrinkled and discoloured from defective nutrition; and the epidermis thick and rough. The concretion which is the characteristic feature of the disease is composed of epidermic and sebaceous substance, desiccated, hardened, and broken up into small masses, corresponding in figure with the areæ within

the lines of motion of the skin. Hillairet terms the case "ichthyose généralisée," from which we may infer that the affection existed all over the body.

The follicular pathology of sauriosis is further exemplified in the preparation—

No. 427, which is a portion of epidermis stripped from the axilla after decomposition of the body had commenced, exhibiting the pathology of *ichthyosis sebacea* or *sauriosis*. On the external surface may be observed the oblong quadrilateral scales of ichthyosis occupying the area between the lines of motion of the skin, while on the internal surface the hair-follicles are seen to project, each follicle presenting a conical pearl-like bulb resulting from distension of its cavity with sebaceous substance, the escape and desiccation of this substance on the skin giving rise to the scales.

No. 428 is a portion of cuticle from the same patient, dried and mounted as a microscopic object.

And No. 429 shows epidermic concretions from the borders of the axilla of a young girl affected with *ichthyosis sebacea*.

It will easily be conceived that the thick and dense concretions of sauriosis may by further additions to their base grow to a considerable length, and in course of time become converted into short spines. The free extremity of such spines will be rounded, the size and form of their shafts will be regulated by the extent of the interlinear area of skin, and their angles smoothed by mutual attrition. Moreover, after a time the activity of their growth slackens. They become pedunculated at the base and are frequently shed, to be succeeded by others similarly developed and produced. When this growth of spines is extensively spread over the body, it gives rise to a state of the skin which has been compared with that of the porcupine, and has been denominated *ichthyosis hystrix*, whilst another of its synonyms is *ichthyosis spinosa*.

No. 430 is an engraving of a female child, aged three years, affected with *ichthyosis spinosa* or *ichthyosis hystrix*, the porcupine disease.

The disease, with the exception of the face, is general, and was first perceived at the age of three months. The child's mother was similarly afflicted, the disease beginning in her, as in her child, at three months. Defect of nutritive power is also evinced in both mother and child by the complete decay of the teeth. The engraving illustrates a note on "hereditary ichthyosis" by Mr. P. H. Martin, of Pulborough, Sussex, and is published in the ninth volume of the "Medico-Chirurgical Transactions" for 1818.

The length of the spines in *ichthyosis spinosa* rarely exceeds half an inch, and their structure is illustrated in a very interesting manner by the series of preparations numbered 431 to 434, which exhibit spines taken from the skin of a so-called "porcupine boy." The spine No. 431 in its dried state measures a quarter of an inch in length, and envelops a group of minute hairs which form convoluted bunches here and there. The rounded prominence on the border of its shaft is due to one of these bunches. The whole body of the boy was covered with similar spines, which stood out perpendicularly from the surface of his skin. To the hand passed over them they conveyed the impression of a coarse plush, and they gave out a rattling sound when the lad moved his limbs.

Dermatoxerasia, however, is not confined to the ill-developed and insufficiently nourished skin of children alone, but is also met with as a consequence of failing power in old age. At this later period of life, the skin is apt to become enfeebled in vitality and reduced in nutritive energy; it becomes hard and dense, wrinkled and discoloured, and in association with these obvious changes, the capillaries are

frequently dilated and form a coarse network—*an-geiectasia*, in the papillary layer of the derma. With this state of defective nutrition of the tegumentary tissue concretions are not uncommonly produced on the skin: they consist of epithelial *exuvix* mingled with desiccated sebaceous substance similar to that found in *sauriosis*, and indeed, the affection has been admitted by some authors into the category of *ichthyosis*. The concretions occur in the form of patches varying in diameter from a few lines to an inch or more in extent, and resemble a dab of dirt, but the patient finds that they are not removable by ordinary ablution, and if they are rudely rubbed the skin beneath is apt to bleed. They represent in fact an incipient degeneration of the tissues of the skin, and are sometimes accompanied with superficial *asthenic* abrasions and ulcerations which refuse to heal, and at other times with the little *schirrhous* nodules which are recognized by dermatologists under the name of *epithelioma*.

The state of the integument which I am now attempting to describe may be defined briefly as one of feeble vitality and nutrition of the skin with excess and accumulation of epithelial matter, in the one case producing *desquamation*, in the other *horny spines* and concretions. In *dermatoxerasia*, *ichthyosis*, and *sauriosis* there is no organic alteration of the vascular structure of the organ, its functions are normal, but weak and languid, and the augmentation of the epithelial products is of a passive rather than of an active character, partly the consequence of *stasis* of the blood, and partly of absence of eliminating force. In the case of *sauriosis* of the elderly skin, however, the tissues are less elastic in their nature, they are more or less worn out, and the concretions are accompanied with a greater degree of *stasis*, sometimes amounting to *congestion*, and with a dilatation of the capillaries, occasionally proceeding to the extent of *an-geiectasia*.

From the excessive production of epidermic matter in ichthyosis, Hebra places it in his group of hypertrophies; and Neumann in microscopic sections of the morbid skin finds hypertrophy of epidermis, increase of pigment in the rete mucosum, hypertrophy of white fibrous tissue in the corium and papillæ, cell-infiltration of the papillæ, and dilated bloodvessels. Moreover, although fat is absent in its normal place, the texture of the corium and subcutaneous connective tissue, it is abundant in the thickened epidermis, where it is infiltrated among its cells and between its lamellæ, suggesting the idea of a fatty degeneration of the epithelium. Chemistry likewise corroborates the presence of fat and cholestrine in the morbid epidermis.

The *therapeutic* treatment of dermatoxerasia, ichthyosis, and sauriosis, makes a demand on our resources for all those means which are calculated to improve nutrition: healthful hygienic assistance in the form of air, exercise, and food; such medicines as are known to strengthen digestion, assimilation, and innervation; and the more obvious adaptation of external remedies for the relief of the morbid condition of the skin.

In the hygienic department we must insist on a nutritive diet: meat with its constituent fat, or some other richly azotized food, three times in the day, varied according to the taste and inclination of the patient; eggs, bacon, sausages, potted meats, and fish being useful auxiliaries. And to these may also be added, as forming a connective link between food and medicine, codliver oil.

From our pharmacopœia we must draw forth the remedies known to be invigorators of digestion, assimilation, sanguification, and innervation; among the best of which are arsenic and iron for infants and children, and these, together with quinine and vegetable bitters, for adults and elderly persons.

It may be unnecessary to say that other general indications must not be neglected, and a healthy state of the secretions should be secured by appropriate means.

In the case of an infant or child, I should consider arsenic, iron, and codliver oil as specific in the treatment and cure of this distressing state of the skin. The growing period of life is best suited for its treatment, for it is then that the skin is most amenable to improvement. But at every stage of existence the same remedies will be found of service, and not least that which is represented by the defective nutrition of second childhood.

The local treatment of the morbid skin is to be sought for in fatty inunctions and saponaceous ablutions. The dry and parched state of the skin is naturally suggestive of oil, glycerine, benzoated lard or cocoa-butter. These applications, thoroughly rubbed into the integument, render its surface soft and pliant; they control the evaporation of its moisture, soften the epidermic exuviae and sebaceous concretions, and prepare them for removal by a subsequent washing with warm water and soap. I have seen the disease apparently cured by three repetitions of the Turkish bath; and, as Lailier informs us, in connection with model 425, treated with glycerinum amyli and simple baths, all trace of the disease disappeared in a week.

But, although the external manifestations of the affection are made to disappear so easily by simple and obvious means, it must not, therefore, be inferred that the disease is actually cured. The skin should be kept regularly moistened with some simple unguent, such as the cocoa-butter or benzoated lard; and the constitutional treatment should be persisted in until the integument is restored to absolute health.

The profits of the caravan proprietor who exhibits the porcupine family would very rapidly be

washed away by soap and water, a proceeding which is, therefore, carefully eschewed; and the odious smell of the human porcupine would, by similar means, be quickly removed.

The prognostication that soap is unknown to the face of the elderly patient suffering under sauriotic concretions on the skin is instantly verified. The lips and the chin may be healthful, from the conjoined operation of soap and the razor; but elsewhere, soap, the especial tonic of the skin, has been omitted, and it is in this neglected region that angiectasia is established, the papillæ cutis become altered and enlarged, epidermic and sebaceous accumulations concrete into black fragmentary masses, fatty degeneration seizes on the epithelium, exuviations are established, very often superficial ulcerations occur, and, by no means rarely, epitheliomatous growths. The primary remedy in such cases is the long neglected soap; mildly stimulating ointment, such as that of the white precipitate considerably diluted, will soften the crusts and help the soap in their removal, and may probably be sufficient to restore the skin to its normal healthfulness. When ulceration is present, I pencil the surface with a solution of potassa fusa in water, equal parts; and a stronger solution than this is necessary where the little scirrhous masses of epithelioma are developed. The repetition of the solution twice or three times in either case is generally productive of cure.

Dermatoxerasia with its outgrowths ichthyosis and sauriosis are to be considered as representing essentially an impoverished or starved condition of the skin; they evince no material alteration of structure, but chiefly a defective state of nutrition; in them, it is not a component part of the skin which is diseased or disorganized, but the entire integument which has failed in its proper nourishment and growth.

Very different from this, in their pathological history, are the three affections next in our catalogue of atrophic diseases; namely, striæ atrophicæ, morphœa, and scleriasis, which are represented by an atrophy or wasting of the normal structure of the skin, and the substitution in its place of a tissue of a lower type of organization, the white fibrous tissue.

This view of their pathology is remarkably illustrated by striæ or lineæ atrophicæ, which may be very properly denominated idiopathic or spontaneous cicatrices. Without any evident cause of injury to the skin, these cicatrices make their appearance as gently curved and undulating lines on different parts of the body, and as far as the eye is concerned are hardly to be distinguished from cicatrices resulting from loss of substance of the integument. A closer examination will detect that they are softer and more flexible than cicatrices resulting from wounds, and have a semitransparency and lustre which are suggestive of mother-of-pearl. They have none of the induration resulting from excess of white fibrous tissue, which is often discoverable in true cicatrices, and consequently exhibit no tendency to the formation of cheloma.

Dr. Wilks has made striæ atrophicæ the subject of a paper in the Guy's Hospital Reports for 1861, and Mr. Bryant has given an admirable illustration of the affection as he observed it on the thigh of a boy nineteen years of age. They appear, says Dr. Wilks, in his description of his own cases, "as if an elliptical portion of skin had been excised and its place refilled with a substance of a softer material. Thus, these marks feel softer than the surrounding skin, and the finger can be placed in them and indent them. For the same reason they swell up if the limb is made to contract so as to bring the edges nearer together." That is to say, the soft connective tissue uniting the separated surfaces

of the severed integument, is made to bulge when the surfaces so separated are brought into contact.

The cause of *striae atrophicæ* appears to me to be twofold; namely,—in the first place, pressure, and secondly, a feebly-nourished and feebly-organized tissue. Pressure, in the form of distension, is very evidently the cause of those *striae* and *lineæ atrophicæ* which occur in pregnancy, in dropsy, and in very fat persons, the *vitiligo matrum*, *hydropicorum* and *obesorum* of the early dermatologists; and in these instances the distension has been carried to the extent of actual rupture of the derma. And no doubt considerable injury might be done to the structure of the integument, sufficient to lay the foundation of the subsequent pathological changes, without proceeding to the extent of actual rupture.

In the majority of instances of this affection we shall find that the part has been formerly of greater bulk, probably from fat, than at the time of our examination, and we are thereby led to infer that the integument has been at some previous period over-distended; or, again, it might happen that the pressure was external and referable to the compression and confinement of dress. The *lineæ atrophicæ* seen on the *mammæ* of young unmarried women, not overburdened with fat, have appeared to me to be a consequence of the misuse of stays, and a similar hypothesis would explain their appearance in a somewhat common seat, the convexity of the hips.

On the other hand, we must admit the existence of a state of the integument favourable to their development, in which slight and trivial causes might prove sufficient to set up the morbid process. This conviction is brought to our minds by the observation of those slighter forms of the affection, which are by no means uncommon, in which no evident cause of pressure is discoverable, and receives corroboration from the fact of the presence

of striæ atrophicæ in association with the next atrophic affection on our list, namely morphœa, which is a true connective-tissue degeneration. Again, the presence of fat constituting a thick layer between the skin and the fasciæ must of itself be an impediment to the free circulation in the skin, and consequently a cause of debility of tissue.

It must not, however, be supposed that these striæ are utterly without symptoms in their development and progress; a red streak, indicating slight inflammation, will always be present at their outset, probably a little itching or soreness, as we know to be the case in the striæ gravidarum; but when the vascular layer of the skin has become absorbed, and nothing remains but its reparative material, then no trace of a previous inflammatory congestion is appreciable.

Striæ atrophicæ are more common in youth than in adult age or in the aged, and in the female than in the male. And the protuberances of the body are most liable to its occurrence; for example, the mammæ, the shoulders, the hips, and the abdomen. In a case of spinal curvature in a young lady who was under the care of Mr. Nunn, there were nine of these striæ crossing a protuberance situated at the lower part of the thorax on one side.

The general direction of the striæ corresponds with that of the pressure or the movements of the part. In Mr. Nunn's case the striæ were transverse; in a case in which the shoulder was their seat, they were curved concentrically towards a centre represented by the point of the shoulder. On the mammæ they have very commonly a radiated direction; on the hips, a vertical direction; and on the male abdomen, a direction from the groins towards the umbilicus upwards; and a radiating direction downwards and outwards towards the outer aspect of the thigh, and downwards and inwards towards the inner side of the thigh. In

pregnant women, they are restricted to those parts of the abdomen where the greatest amount of tension has existed.

The *striae atrophicæ* are not so frequent in the proper lines of motion of the integument as in those which may be termed accidental; for example, in the course of the line of pressure of one mass of the subcutaneous fat-loaded tissue against another. In examining a military officer, of about forty years of age, for a chronic dry eczema which was situated on the lower extremities, my attention was attracted by some dark red flexuous lines situated at the inferior part of the abdomen and upper part of the thigh; they were longitudinal in direction, and, for the most part, inclined outwards, crossing the folds of motion which occupy the groin. The lines had the appearance of veins lying close to the surface of the skin; but the finger detected that they were not hollow cylinders but the surface of a deep vertical cleft or gap in the subcutaneous tissue. They ranged in length between one and four or five inches, and were somewhat less than a quarter of an inch in breadth; some of them were deeper in colour at the upper end, fading to the lower, and there assuming the white cicatricial structure, but without any diminution in breadth. One began in the normal transverse line of motion of the groin by a deep red and seemingly ecchymosed circular spot; and another presented a similar spot at its middle, where it crossed the same line of motion. The patient was fat; and it was evident that when his trousers were tightly buttoned, the integument would be forced into vertical rolls, and it was in the line of pressure of these masses that the red *striae* were developed. He had noticed them only a few weeks, and their development had been unattended with irritation of any kind.

The leading features of this case were: the redness of the *striae*; their greater depth of redness at

the upper end, or where they crossed lines of motion ; and the incipient cicatricial transformation at the lower ends. When pressed with the finger, the redness disappeared close to the surface, but the deeper redness was still visible. This case further illustrates a debilitated condition of the skin, which would predispose to the chronic dry eczema and the accumulation of fat in the subcutaneous tissues, as well as to the lesion occasioned by the undue pressure of one mass of fat-loaded subcutaneous tissue against another.

Schultze, who examined several hundred persons in reference to these striæ, found them on the thighs and buttocks of women who had had no family or were but recently pregnant, in the proportion of 36 per cent. ; in tall men, 25 per cent. ; and in men of ordinary height, 6 per cent. Hence, on the theory of their origin from over-distension of the skin by inward enlargement, he attributes their presence in women to the horizontal growth of the pelvis ; and in men, to the growth of the pelvis in depth.

Kaposi took a thin section of one of these cicatricial striæ from the limb of one of his patients, and, submitting it to the microscope, found the epidermis and rete mucosum in a state of atrophy ; the surface of the corium divested of papillæ ; and the connective tissue made up of thin bundles, with a scanty admixture of slender bloodvessels and without traces of fat.

From linear atrophy of the skin, the transition to morphœa—a form of atrophy which not unfrequently resembles very closely the cicatrix of a wound, and might reasonably be mistaken for such—is very simple ; and is represented in our collection by a series of drawings.

Morphœa is one of the forms of the leuce of the Greeks ; the word morphœa simply indicating a *blotch*, and leuce pointing out its *whiteness* ; but

morphœa is sometimes accompanied with an accumulation of pigment in the affected skin, and then, instead of morphœa alba, it is termed morphœa nigra. There are, besides, two other conditions of the morphœa which have received distinctive names; sometimes the skin is protuberant and hard, of an opaque white colour or yellowish in tint, looking as if the cutaneous tissue were infiltrated with wax, and sometimes having the lustre of ivory: in that state, it is named morphœa tuberosa alba. At other times, the white infiltrated material has been absorbed, or, without having existed, the morphœa has assumed the appearance of a scar, and sometimes it has lapsed into a state of complete atrophy, and is thin, corrugated, and discoloured; and in this state, the disease warrants the designation of atrophic in a double sense, and is termed morphœa atrophica.

The pathological stages of this curious complaint may therefore be said to be: *first*, an erythematous blush, having a lilac or slightly crimson tint, due to congestion of the skin; and it will be remembered that the lilac or purplish tint has an important significance as implying feebleness of circulation and a venous change in the blood; *secondly*, a white area with dispersion of the lilac-tinted erythema to the margin of the blotch; the white area being occasioned by proliferation of white fibrous tissue in substitution for the vascular layer of the skin, or by infiltration with the white material already noticed; the *third* stage is one of atrophy, sometimes producing a cicatrix, and sometimes a state more resembling a dry, withered, and, as it were, mummified skin. These pathological conditions, more especially the proliferation of white fibrous tissue and atrophy of the vascular and softer structures of the skin, are necessarily accompanied with a hard or sclerous state of the integument; hence the word scleroderma, or, more properly, dermatosclerosis, scleriasis, or sclerema; and dermatosclerosis may be very con-

siderably extended even to the whole surface of the body, and be accompanied with the hardness and contraction common to fibrous structures deposited in substitution for other tissues, as in the instance of cicatrices. It is this latter pathological state of the integument and subcutaneous white fibrous tissue that has been described by Addison, and has received the name of the kelis of Addison.

But before I proceed to a demonstration of morphœa let me say a few words with regard to scleriasis. By this word and its numerous synonyms is implied "hardness." It was first made use of in the last century to designate a peculiar hardening of the skin and integument met with in infants; the hardness was like that which is observed in the integument of infants after death, and as this was the principal symptom evident in the skin, the term *sclerema neonatorum* seems to be peculiarly applicable; it was likewise named *induratio telæ cellularis neonatorum*.

More recently the word *sclerema* has been adopted to designate a hardness of the integument met with in adults, and this gave origin to the term *sclerema adulatorum*, with the synonyms, *scleriasis*, *sclerosis*, *scleroderma*, *dermatosclerosis*, and so forth. In the case of the adult, the term is more indefinite than it is in the infant; and it has been used differently by different authors. In 1845, Dr. Thirial gave an account of two cases which he had observed in the clinical wards of Trousseau, in Paris, and described them under the title, "du sclérème chez les adultes." The patients were young women, aged, respectively, $15\frac{1}{2}$ and 21 years; both suffered from amenorrhœa, and one was chlorotic. In the younger of the two, amenorrhœa was caused by washing clothes in cold water on the first day of menstruation; the flow of menses ceased directly, and the peculiar symptoms of the *sclerema* came on within a few hours. In this case, menstruation

returned in seven or eight months, and then the sclerema disappeared.

The sclerema in both cases began by a feeling of constriction of the throat, and next followed a general hardness and smoothness and stiffness of the integument, which extended from the head to the lower rim of the thorax and elbows in the elder patient, and down to the thighs and wrists of the younger; in the latter case, likewise, affecting the tongue. The appearance of the skin was pale, polished, smooth, and unwrinkled. It was hard and firm to the touch, not pitting on pressure, not œdematous; but its consolidation had the effect of contraction; it impeded the free opening of the mouth, and interfered somewhat with deglutition. M. Thirial compares the appearance and touch of the skin to that of a frozen corpse, rigid but warm.

In 1867, without any knowledge of Thirial's cases, I published in the sixth edition of my "Diseases of the Skin" (p. 389) a similar case, under the head of sclerosis dermatos, and have since described another in my "Journal of Cutaneous Medicine."

In the former work I observe, "*Sclerosis telæ cellularis et adiposæ* was shown in the case of a lady of 30, who, after some degree of precordial suffering, consisting principally in a sense of weight and nausea, was attacked with slight erythema of the face, neck, and shoulders. The redness was inconsiderable and but slightly pruritic; but there existed an uncomfortable feeling of weight, or pressure, and stiffness, accompanied with a little swelling, and a sense of rigidity which interfered with the motions of her jaw and neck. I first saw her a few weeks after the commencement of the attack, when the erythema had subsided without desquamation, and when the more striking symptoms of the affection were paleness and a yellow tinge of the skin, with a sensation to the touch of thickening, solidity, and hardness of the skin and subcutaneous

cellular tissue. It was clearly evident that the density of the integument was not due to œdema; and, although there was some degree of pitting on pressure, it was the kind of pitting that would be produced by pressure on a skin of lard rather than upon a portion of skin infiltrated with serous fluid. When the hand was pressed upon the skin, it left a pale impression which very slowly recovered its normal colour. The lower border of this altered skin could be distinctly traced with the finger, and gradually merged into the healthy integument."

My opinion with regard to the nature of this disease is expressed in the succeeding paragraph, which I have since seen no reason to alter. "The pathological changes above described are, doubtless, such as usher in the boucnemia tropica, which, in a mild form, is called the 'rose,' and appears to be an erythema or erysipelas of the integument, resulting in thickening and condensation. The 'rose' is met with in Bermuda, and the boucnemia farther south, in Barbadoes."

I should therefore have adopted this form of acute sclerema as a fitting introduction to elephantiasis Arabum, but as it is considered by several authors as a form of scleriasis, I refer to it as such in this place. Looking to the ordinarily prolonged duration of scleriasis, the form now described has been called *acute*, while Dr. Hilton Fagge prefers to name it *diffused*, in contradistinction to the keloid of Addison, which has been named *chronic* scleriasis, but which he prefers to call *circumscribed* scleriasis.

The second form of scleriasis, the chronic, or more expressively the circumscribed form, is the keloid of Addison, the disease which I have myself described and am about to illustrate under the name of morphœa. In 1868 I published an analysis of twenty-five of these cases of morphœa in my "Journal of Cutaneous Medicine," vol. ii. page 153.

But there is still a third form of scleriasis, to

which I should have preferred to limit the name, a form frequently general in its manifestation, and attended with a severe and incurable atrophy, a disease of the most grave character, and one which I described in 1867, when I was doubtful as to its nature as a general atrophica cutis.

These three forms of sclerema, although presenting some features in common, are sufficiently distinct from each other to render a separate consideration necessary. The first is an affection of limited duration and terminating in spontaneous cure. In the second also, the skin not unfrequently recovers more or less completely its healthy condition ; but the third is hopelessly incurable, although equally remarkable for the slowness of its progress and little disturbance of the general health. The following is an illustration of the more severe form of the disease.

A gentleman aged 54, by profession a secretary to a society, consulted me in June 1869 for an affection of the hands and breast, which he told me had been called by a French physician "sclérodémie symétrique." He was thin, his face somewhat emaciated, the hollows of his cheeks and orbits deep, features anxious, and the skin dry, yellowish, and stretched, as though adherent to the structures beneath. Nevertheless, there was nothing in the aspect of his countenance to indicate more than ordinary debility and want of nutritive power, which his general appearance and demeanour as well as his gait confirmed.

The hands were cramped in appearance, the fingers bent, the knuckles red and swollen, resembling chilblains, and sometimes painful, whilst the inter-nodial portion of the fingers was small and contracted. The whole of the affected skin was hard to the touch and smooth, looking more like horn than flesh, and the lines of motion were obliterated. The appearance of the hands was suggestive of a stagnation or interruption of the circulation, and to

the patient they felt full and distended. He complained of inability to maintain the temperature of the hands and of difficulty in holding his pen or picking up small objects. The right hand was more severely affected than the left, and the first two fingers of the left hand more than the rest. Every here and there were corns in the epidermis, and the nails were ribbed longitudinally and transversely, marking their surface into small square compartments. The back of the fingers was deeply pigmented of a dark brown colour, the pigmentation extending to the middle of the hand; beyond this line the skin was bleached, and around the wrist resumed its deep pigmentation. The affection of the hands began three years ago with occasional swelling, while the stiffness and hardness followed some months later. He complained also of a similar feeling in the great toe of the right foot.

On the upper part of the front of the chest, the skin had undergone a similar sclerotic change, it was firmly adherent to the sternum and pectoral muscles, was hard and contracted, and had drawn the shoulders forwards and narrowed the capacity of the chest. The morbid surface was partly leucodermic and glazed, and partly hyperæmic, the hyperæmic portions being segments of circles which originally formed the boundary of leucosmic centres. There was likewise a hard and raised ridge stretching across the forehead, which produced a sensation of tightness. His neck was deeply pigmented with a brown discoloration, in the midst of which were numerous white and dense spots of scleroderma of small size. The rest of the skin pitted easily on pressure.

He stated that he was first made aware of the invasion of the disease by occasional swelling of the hands; this occurred three years before his visit to me, and was repeated from time to time. Some months later the hardness and contraction made themselves sensible, and subsequently he has

experienced pains in the joints and tingling in the affected skin. Next in order the affection of the front of the chest became evident. The morbid change in the neck was ushered in by stiffness and difficulty of raising the chin, and the contraction of the skin on the chest interferes with the free action of the shoulders and arms. He likewise complained of a slight impediment in swallowing, which he expressed by saying that the food reached a certain point and there met with a difficulty in going further.

He states that he has never been strong but always active. His father died of asthma at the age of 45, his mother of debility and exhaustion at 60. A brother and sister enjoy average health, the latter being somewhat rheumatic. His present state is one of considerable feebleness, his voice weak, his back and knees feeble, stiffness of limbs and aching pains in his joints, particularly the knees and hips. He likewise complains of a tingling sensation in the skin. Some months after he was attacked, the French physician prescribed for him arsenic, which he said loosened all the joints of his body. He was then treated with warm sea-baths and sulphur baths, with the perchloride of mercury internally; and changing his medical adviser, mercury was repeated to the extent of producing dysentery. During the five years he has been under my observation I have prescribed for him citrate of iron and quinine, syrup of the iodide of iron, syrup of the phosphate of iron and strychnine, Fowler's solution in two-minim doses with wine of iron, and during occasional interruptions from diarrhœa, chloral hydrate, bromide of potassium and liquor belæ. Locally the treatment consisted of frictions with liniment of mercury with chloroform, liniment of chloroform with aconite, and liniment of camphor and cajeput. The liniment of mercury and chloroform he believed produced an attack of diarrhœa and was otherwise too stimulant.

In 1870 he was troubled with superficial ulceration over the malleoli of the right foot, and in 1871 suffered from an ulcerated excoriation on one of his knuckles. At the latter end of 1873 he reports that he has kept pretty well; he is better in general health but extremely sensitive to cold; there is more uneasiness in the hands and a sensation of pricking and burning, as though with a hot iron. The fingers are more crooked and are seldom free from an ulcerated excoriation. When the ulcer heals, a callus is formed, and the cicatrix is apt to break out again. He has likewise an ulcer on the dorsum of his foot. He further complains of increased difficulty of deglutition, and the bowels are somewhat confined.

In 1874 he reports the left foot attacked like the right, with considerable congestion and fulness of the toes. He is also suffering a good deal of nervous irritability, for which I thought it necessary to prescribe a nerve-stimulant.

It will be noted with regard to this case, that it is slow and progressive, and that it has never once paused in its onward course; the disease has gradually increased in extent, and almost imperceptibly, and has only shown a tendency to activity when treated improperly. This gentleman died while these lectures were in the press in the spring of 1875.

No. 435 is a water-colour drawing, showing a patch of *morphæa* at different stages of its progress. The patient was a young lady of 20, and the morbid patch occupied the centre of the cheek. Its area presented the appearance of a cicatrix, white and depressed, and bordered by a slightly-raised lilac-coloured margin, the colour fading into the tint of the surrounding skin. The brown spots situated within the area and near its circumference are papular eminences. The pathology of this affection is a fibrous transformation of the structure of the skin with atrophy; otherwise a *fibroma with atrophy*, or a fibrous degeneration of the skin.

No. 436 is a water-colour study of *morphœa*, as shown upon the forehead and cheeks of an unmarried woman, aged 28. One patch crossed the nose and expanded upon the cheek at either side; it was white and uneven, like a cicatrix, the skin being in a state of seeming atrophy, and bounded around the circumference by an erythematous blush of a lilac or purplish tint. The other occupied the middle of the forehead, and was also white in the centre and surrounded by an erythematous purplish halo. This latter patch measured two inches in longitudinal diameter, and nearly the same transversely; the white centre was shrunk below the level of the lilac border; it was tense and seemingly adherent to the bone, insensible, to all appearance non-vascular, and resembled leather rather than human integument. It was skin in a state of deficient sensibility, deficient vascularity, deficient pigmentation; in one word, in a state of atrophy.

This case came under my notice in 1850, and was published in my work "On Syphilis" in 1852; it was one of many obscure cases which, from a similarity of features, I had assembled under the head of hereditary syphilis, but afterwards eliminated from that group to form part of a series of which *morphœa* occupies the principal place. The disease began in this young woman at the age of 21; the patches first showed themselves "as white itchy spots, which appeared on the fingers as well as on the face. The spots soon became red, and then expanded into rings. Those on the hands went away by degrees, but those on the face have remained. There has never been any ulceration of the surface, and she herself erroneously attributes the cicatrices to the effect of blisters which were applied to restore the healthy state of the skin."

No. 437 is a water-colour drawing of the face of a boy 8 years of age, showing patches of *morphœa* on the forehead, cheek, chin, and upper part of the

neck. The patch on the forehead is in a state of atrophy, as denoted by the thinning and disorganization of the skin (*morphœa atrophica*). The integument of the eyelids is also in a state of atrophy, the lower eyelid being slightly drawn down by contraction of the skin. On the cheek is a yellowish-white and somewhat prominent patch of an annular figure, which is hard to the touch and smooth and glossy in appearance (*morphœa alba tuberosa*); another patch of *morphœa atrophica* is seen on the chin, and additional patches, both of the protuberant and atrophic kind, are seen upon the lower part of the cheek and adjacent part of the neck. The case of this patient is reported at length in the second volume of the "Journal of Cutaneous Medicine," pp. 172 and 430. The drawing is by an American artist, Mr. Nutting.

The disease had been two years in existence at the time the drawing was made. Five years later, when 13 years of age, I found that all appearance of the morphœa had ceased, but that a state which might be called sub-atrophy of the integument remained. There was, however, another fact conspicuous which had been only slightly evident at the first report,—namely, that the nutritive incompetency was not confined to the skin alone and to the peripheral nerves, but was participated in by the entire of the vaso-motor or trophic nervous system of that side of the face, with one exception, that of the eyeball. The consequence is, that the left side of the face has not grown, while the right has; the left side of the face is the concave side of a curve, of which the chief convexity is on the right side. It might be said that the right side of the face has somewhat obtruded itself upon the limits of the left; it looks as though it had grown over the left, and had flexed the left side into a hollow.

Looking at the face generally, the want of harmony of its two sides is very evident; the profile of

the right side is that of a well-conditioned boy, while that of the left is of one wizened and starved. But the eyeball has not participated in the defective nutrition, and is therefore abnormally prominent. On closer inspection, it is evident that the skin is sound, but a little browner than that of the right side, the pigmentation being uniform and uninfluenced by the distribution of the original disease. The skin also presents a subatrophic character, which is more decided in the situation of the formerly diseased spots than elsewhere. The rest of the structures of the face, the muscles and the bones, have the same undeveloped character as the skin: there is no defect of motion of the face, therefore it is probable that the muscles are simply arrested in their growth; but in the case of the bone, particularly of the forehead, there is an evident increase of ossific substance, without the usual expansion of the frontal bone, leading to the inference that the hemisphere of the brain of the left side may be equally the subject of suspended nutrition, and consequent defective development. It will be remembered that the right side of the head is normally developed; and therefore, as we should expect, there is no intellectual deficiency in the boy, and his general health is thoroughly good.

Another phenomenon in connection with this case is very interesting. On the left side he has not yet shed his milk teeth; they are all there, discoloured and in a state of decay; but during the last twelve months two of the permanent teeth have shown their cusps above the gum, and have led to the hope that, although retarded, the permanent teeth may at some future day be produced.

A very interesting case of dermatosclerosis was brought under my notice in 1873 by Dr. Henry Bennett. The patient was a tall, handsome, married woman, 27 years of age. She had recently been suffering under congestion of the uterus, but from

her infancy presented the peculiar state of hardening, contraction, and white fibrous degeneration of the skin which constitutes dermatosclerosis. The disease was first noticed when she was nine months old, as a patch of small extent, but went on gradually increasing until it occupied nearly the whole of one side of the trunk of the body, the arm, and part of the thigh. In temperament she was nervous and excitable, and she stated that her mother, during her pregnancy, had been seriously frightened by hostile Indians. Such an event I should consider quite capable, by disturbing the innervation and nutrition of the mother, of causing the aberration of innervation and nutrition presented by her child in the instance of dermatosclerosis.

The microscopic examination of the disease has been principally directed to that form of the affection which I have described as morphœa, the scleriasis circumscripta of Fagge, scleriasis and scleroderma of the Germans, and kelis of Addison, and serves to corroborate the visual diagnosis of the disease. The epidermis is unaltered in structure; the rete mucosum abundant in pigment in the pigmented portions of the skin; pigment has likewise been found surrounding the larger capillaries, the ducts of the cutaneous glands, and within the sebaceous glands. The papillæ cutis are loaded with connective-tissue cells; the corium and tela cellularis subcutanea thickened and condensed by closely-packed strands of connective tissue mingled with elastic tissue; the under surface of the corium is closely blended with the subcutaneous tissue, and the latter with the fascia so as to form one uniform layer; there is an absence of fat in the tela adiposa, and the glands and hairs are more or less altered and impoverished by the state of disturbed nutrition. It was doubtless in the acute and diffused form of the affection that Rasmussen found the skin thick and swollen and infiltrated with a dense accu-

mulation of lymph-cells which were principally collected around and between the bloodvessels. It is probably to an accumulation of this kind that the condensation and thickening of *morphœa tuberosa* are due. The subject will possibly undergo further investigation at the hands of Neumann, Kaposi, and others, particularly when the distinctive characters of the several forms of the affection are recognized by the German dermatologists.*

THERAPEUTICAL CONSIDERATIONS.—If we take a retrospect of *striæ atrophicæ*, *morphœa*, and *scleriosis*, with a view to *therapeutical* treatment, we are led to conclude that the manifestations of these diseases in the skin are due to a deficient nutritive force, to an insufficiency of power, not merely to maintain the integument in its integrity, but to prevent it from lapsing into loss of substance and inadequate repair. A defect of local power generally implies a defect of general or constitutional power; hence, our remedies must be selected with the view of giving general strength to the individual as well as to the part. The remedies the most likely to serve our purpose in these cases, are arsenic, quinine and iron, iodide of iron, phosphorus, nitrohydrochloric acid with bitters, and the perchloride of mercury with liquor cinchonæ and hydrochloric acid.

* Moriz Kaposi observes, in the 3rd vol. of the English Translation of Hebra's "Diseases of the Skin," 1874, "Hebra is of opinion that many symptoms during the course of the sclerosis certainly point to a difference in separate cases, and justify us in distinguishing those cases in which there is a resemblance of the diseased skin to parts of a frozen corpse, from those in which the skin appears tightly stretched, thinned, and pigmented; and this is so much the more desirable because the former have usually an acute and the latter a chronic course. The infrequency of this disease, however, prevents his coming to a conclusion as to whether we have to deal with one disease in several forms, or with different maladies."

And to these must be added the hygienic assistance of food, exercise, and air. In young and delicate persons the combination of cod-liver oil, iron, and arsenic is particularly suitable, especially if there exist any predisposition to struma. Locally, saponeous ablutions and frictions are especially calculated to be serviceable; moderate local stimulation, and shampooing in the Turkish bath. Where the disease is of small extent, inunction with a mild mercurial ointment is calculated to be of service, and sometimes the sluggish tissues may be awakened to their duty by pencilling with tincture of iodine or a solution of potassa fusa. The quasi-ulcerations of morphea are best treated with the oxide of zinc ointment or with the oxide of zinc in lime-water, so as to constitute a lotion.

One of the most distressing symptoms of scleriosis of the hands and feet results from contraction of the arteries and pressure on the veins so as to retard circulation; from the operation of these causes we have congestions, sometimes arterial and sometimes venous, and more or less infiltration, causing hardness and condensation of the tissues and inflexibility of the joints. With this state there is sometimes a little swelling, but more frequently a shrinking or contraction, or atrophy of the affected parts. Under such circumstances ulcers are sometimes formed on the prominent points of the joints, and also at the ends of the fingers, and from the latter there may issue portions of cellular and atrophied bone. In these cases I have been accustomed to pencil the sores with the compound tincture of benzoin, and to wrap around the fingers and toes a dressing of unguentum resinæ with cajeput oil.

The acute or diffused form of scleriosis presents several points of analogy with erythema tumescens, which is apt to attack the mouth and tongue as well as the integument. The hardness of the integument in this form of erythema is often quite equal to that

of the scleriosis in question, the essential difference being that it disappears in a few hours instead of remaining for days and even for weeks. This resemblance, as well as the special symptoms of the case, led me to prescribe a mild tonic aperient for the first of the patients who came under my notice, and I have reason to believe that she recovered completely: she promised to return to me if she were not relieved, and as she did not fulfil that promise, I believe that the cure was not long in being established.

In pursuing the history of the diseases comprehended in the preceding group, namely, dermatoxerasia, ichthyosis, sauriosis, striæ atrophicæ, morphœa, and scleriosis, we have observed a prevailing defect of nutrition, or atrophy; for, although in ichthyosis and sauriosis there may be said to be an excess of epidermic and sebaceous matter, that is, excess of an inferior product, the true skin is, at the same time, insufficiently nourished and developed; and even the accumulation of epithelium represents, in a measure, a want of power to reject or exuviate rather than a superabundance of growth. The same may be said of morphœa and scleriosis. There is, in fact, an excess of white fibrous-tissue elements, but there is a defect of normal structure, and a tendency to atrophy of the true skin.

I have now, however, to invite your attention in an opposite direction, and consider what effects may be produced by an excess of nutrition, or hypertrophy of the skin. One of the simplest forms of dermal hypertrophy is that which is popularly termed a *mole*. It is a purely cutaneous production, and may be congenital, but is more frequently accidental in its origin. It is a mere hypertrophy of the derma of limited extent, and may be denominated *spilus* or *nævus cutaneus hypertrophicus*; sometimes it is furnished with a tuft of hairs proceeding from

hypertrophous bulbs, and, therefore, thicker and stronger than the hairs of the adjacent skin. When furnished with a tuft of hairs, the hairy mole is denominated *spilus pilosus*, and also *nævus pilosus*, because hairy moles are not unfrequently congenital, that is, "native"; and, in the same sense, they are distinguished by the name of *nævi materni*. Besides being furnished with hairs, these moles often present an excess of pigment; in which case they are called *spili pigmentosi* or *nævi pigmentosi*.

No. 438 is a wax cast of the neck of a young lad, showing a hairy *spilus*, which, being congenital, is likewise a *nævus pilosus*, situated just below the body of the jaw. It was attributed, on the part of his mother, to a longing, during her pregnancy, for a feast of sucking-pig.

No. 439 is a photograph showing a hairy *nævus* that occupied the greater part of the side of the face. It covered the right ear, and was continuous with the hairy scalp. The child had numerous similar patches, of small size, distributed over the body. Nevertheless, it is not to be inferred that excessive growth or hypertrophy implies increased vital power either in the tissue or in the individual; on the contrary, it indicates feebleness of controlling power, and might be better expressed by the term "aberration of nutrition." Thus, in the feeble and, at the same time, actively functional integument of children, we often meet with warts, which, pathologically, are an hypertrophy of the *papillæ cutis*, and a corresponding hypertrophy of their epidermic sheaths. This hypertrophy is, indeed, an evidence of active growth, but it is an equal evidence of a weak controlling power in the skin, and, possibly, in the system. For a similar reason, warts are very commonly found on the impoverished skin of elderly persons, and are apt to present considerable variety of appearance.

Warts, or *verruçæ*, as they occur in an isolated

form on the hands of young persons, are sufficiently well known to us all; but sometimes they appear in the shape of an extensive eruption.

No. 440 is a photograph of a boy, aged 9, showing *congenital warts*. The abnormal growth is most remarkable on the left side of the body; for example, the left half of the abdomen, terminating abruptly at the linea alba, the left groin and left side of the scrotum, the left axilla, arm, and hand. Patches may also be seen on the right breast and right forearm, while in the neck they form a prominent "cauliflower-looking" mass both before and behind. The lad was pale, nervous, and strumous, with notched and decayed teeth, and presented a band of alopecia areata on the left side of his head. His mother received a fright at the fifth month of pregnancy, and the abnormal state of the skin of her infant was perceived in the form of dusky streaks during the first week of his life. Mr. Richard Davy, to whom we are indebted for this interesting illustration, remarks that the boy "was literally splashed all over with warts," in some spots pedunculated, in others occurring as soft velvety patches or linear streaks; the parts especially disfigured being the features, neck, inner side of arms, dorsal surface of hands, chest, left nipple, and umbilicus, where the growths were pedunculated; abdomen, buttocks, back, legs, and tibial side of the dorsum of the left foot, involving the two inner toes. The papillæ composing the cauliflower masses on his neck were for the most part three-quarters of an inch in length, and their base was bathed in a fetid puriform secretion.

No. 441 is a plaster cast of the left hand of a young lady, showing a crop of *verruca minimæ* on the back of the wrist, and large warts of the common type (*verruca vulgaris*) on the middle and ring-finger, especially on the former.

No. 442 is a plaster cast of the right hand of a

gentleman of about 25 years of age, studded with *verrucae minimæ*; on the back of the hand they are disposed in aggregated groups, and on the knuckles of the metacarpo-phalangeal articulations are broader than elsewhere.

And No. 443, another plaster cast of the left hand of the same gentleman, shows a similar distribution of *verrucae*.

In the case illustrated by the photograph 440, it will be remarked that although, for the most part, sessile, many of the warts—for example, those upon the neck—were pedunculated and branched, giving rise to cauliflower growths; it is not uncommon to meet with pedunculated and palmated *verrucae* upon the scalp; but in the instance before us, the cauliflower warts assumed an appearance which is amply illustrated by the preparations in the Hunterian collection of warty growths and warty vegetations,—Nos. 2278, 2279, 2279*a* and *b*, 2280, and 2713*A*, of the “General Pathological Series.” The majority of these are cutaneous growths from the labia pudendi and præputium clitoridis, one taking its origin at the verge of the anus. Their general character is that of lobulated and nodulated tumours, suggestive of the idea of cauliflower growths; whereas No. 2280 is a small pedunculated tumour, bristled on the surface with a remarkable thelomatous outgrowth, consisting of elongated papillæ enveloped in epidermic sheaths.

Another example of these thelomatous growths is afforded by the preparation No. 2308*A* of the “General Pathological Series,” which is a portion of skin from the leg, exhibiting considerable thickening of the epidermis, with a state of hypertrophy of the papillary layer of the derma and dilatation of the hair-follicles. The surface of the epidermis is an exaggeration in form of that of the derma, and presents numerous prominences, which are the areas of the lines of motion of the integument. This patho-

logical state is probably due to passive nutrition, consequent upon retarded venous circulation, the latter being dependent on a varicose condition of the veins of the limb, and is an example of perverted nutrition.

In anatomical structure, the papillæ, which are the essential part of the wart, are composed of a mesh of connective tissue, mature and progressive, together with a vascular loop, enclosed in a sheath of rete mucosum and epidermis. It is from the rete mucosum that the wart derives the pigmentary tints which are sometimes observed in them.

As one of the normal functions of the papillæ cutis is to produce epidermis and nail, both of them structures of the nature of horn, so occasionally, where any cause exists for the development of papillæ to a considerable size, formations of a horny nature will be the result. A remarkable example of this phenomenon is exhibited in No. 444, which exhibits a horny structure resembling a nail developed upon the under surface of the great toe, and which may be fairly inferred to be a supplementary toenail, due to the accidental development of matrix-structure in an unusual situation. This aberrant nail lay flat against the skin, and grew backwards, "filling the fossa in front of the ball of the great toe." Mr. Houghton, of Dudley, by whom the specimen was presented, observes that "the appearance of the last joint of the toe was very remarkable, for it looked as though it had two nails, on opposite surfaces, growing in opposite directions. The horn had been about two years in formation, the patient being a woman, aged 66. It caused very little inconvenience or pain in walking, but it was very painful at night, and on this account, at her request, I removed it." It measures in length one inch, seven lines being free, and the remaining five lines constituting its root; its breadth is seven lines, or

rather more than half an inch; and thickness, a quarter of an inch. It is convex on the external surface, and marked with transverse lines, indicating successive growth, and in general appearance is undistinguishable from a rough toe-nail, terminated by a rounded obtuse point.

Nos. 445 and 446 are epithelial rather than epidermic horns, although developed on the exposed and dry mucous surface, and in other respects identical with the epidermic horns at present under consideration.

No. 445 is a horn developed on the *præputium clitoridis*, in the middle line. It is singularly horn-like in appearance, and measures half an inch in length. The horn was removed by operation and presented by Mr. Hancock, our late President.

No. 446 is a similar horn, but shaped like a finger-nail, developed on the glans penis of a young gentleman, aged 24.

In this category I have likewise given a place, for the present at least, to Nos. 447 and 448, which represent horny concretions, rather than horny growths.

No. 447 represents several *horny concretions*, partly resulting from hypertrophic growth, and partly from epithelial sordes, developed on the integument of the penis and prepuce. And

No. 448 is a water-colour drawing of the penis from which these concretions were obtained.

Other horny growths and concretions will be found in the "General Pathological Series," in preparations Nos. 2300, 2300_A, 2300_B, and 2469.

THERAPEUTICAL TREATMENT.—Warts, being an aberration of nutrition of the skin, are sometimes purely local; and at other times symptomatic of a disturbance of nutrition prevailing in the general constitution. Hence extensive eruptions of warts are frequently removed by the internal use of arsenic alone,

without external application; and in every case where they are numerous, this remedy should be adopted as a means of strengthening and invigorating the skin, and establishing a more healthy function.

The local treatment of warts consists in destroying them with strong acetic acid, or, still better, with a strong solution of potassa fusa, one part water to three of caustic. A minute drop of this latter solution, allowed to rest on the summit of the wart, slowly makes its way through the whole horny mass, gelatinizing it, and charring the blood contained in the papillary loops; the hypertrophic papillæ are thoroughly destroyed, and the wart is obliterated at once. This process necessarily requires that the warts should have a certain size and be not too numerous, and is especially well suited for those palmated tufts of hypertrophied papillæ cutis which are commonly found in the scalp. Where, however, the verrucæ are minute and very abundant, they should be attacked with an astringent and stimulating lotion, such as that of the chloride of zinc or perchloride of mercury. The strong solution of potash will likewise be found a useful remedy for destroying the morbid base on which some of the horny concretions which we have just been considering are developed. This solution, from its immense power, is capable of attacking some of the more defined horns, as well as the horny concretions, and has the advantage of limiting the destruction of the skin to the actual base of the abnormal growth.

The study of warts naturally leads us on to that of corns, which are identical with warts in pathological structure, but are considerably modified in their behaviour by the nature of their cause. Warts may be said to be spontaneous growths of the skin, but corns are not spontaneous; they are the consequence

of an irritation inflicted from without. For the production of a corn there must be an external injury in the form of pressure; to the irritation caused by the pressure, succeeds vascular congestion, then excessive nutrition of the congested papillæ and consequent excessive growth of their cuticular sheaths. Thus we have produced a papillary or fibrous corn, which resembles in all essential particulars a papillary and fibrous wart. But there follow afterwards a series of retrograde changes which belong exclusively to the corn. The accumulation of epidermis compresses the papillæ and gradually obliterates them. The continued pressure of the epidermis produces absorption, the derma is much attenuated, and a deep hollow is formed. A further prolongation of the pressure would occasion absorption of the subcutaneous bone and penetrate a joint, as I once found to have been the case.

CLAVUS or corn is very amply and instructively illustrated in the "General Pathological Series" of the Hunterian collection, by preparations Nos. 4, also 2309 to 2313 and 2315. In these preparations *corns* are shown in their epidermic thickness and structure, in the impression made by them on the derma, and also in section. Nos. 2310 and 2312 exhibit a conical horny prominence of the under surface of the epidermis, and a deep hole on the derma in which the prominence was lodged; the aperture in the latter of these preparations being surrounded by an elongated lip. Preparations 2311, 2312, and 2315 show the central nucleus or "eye" of the corn, Nos. 2309 and 2311 its fibrous structure resulting from the production of vertical fibrous sheaths by the hypertrophied papillæ cutis, and No. 4 a subcutaneous bursa interposed between the corn and the convexity of the joint.

It is not a little curious to observe the derma rapidly shrinking away from the monster of its own creation, first yielding up its own papillæ as a host-

age and then interposing, but in vain, a bursa between its under surface and the threatened joint or bone. Not unfrequently the pressure of the cone of epidermis occasions serous effusion and even suppuration. Serous effusion is common in the case of corns developed between the toes, and contributes to render the wedge of epidermis soft, a condition likewise promoted by the moisture incidental to the contact of the toes; hence the term "soft corn" usually applied to these formations.

As corns are generally admitted to proceed from pressure, which at first promotes growth of the part and subsequently converts that growth into a cause of destruction, the treatment of corns is apparently simple. First, remove the superficial pressure; secondly, remove the horny part of the corn which is the cause of the deep-seated pressure. But even in the case of corns which may occur to every one, the skin of some persons is more favourable to their production than that of others, and likewise particular states of the skin. Hence the simple plaster placed over a corn which so much relieves its pain, cannot act by diminishing the pressure; it may be said to distribute it more equally and be therefore less severely felt, but its real efficacy consists in soothing and tranquillizing the underlying skin. Hence the corn-cutter, or rather corn-grubber, always completes his operation by covering the injured part with a piece of plaster. Between the toes, where the skin is thin and the corn moist and therefore soft, a necessary precaution after removing the thickened cuticle is to interpose a cushion of cotton wool, which should be renewed daily.

A more grave form of papillary hypertrophy has been denominated papilloma. In papilloma the vascular structures are chiefly implicated and the normal epithelial growth is lessened and almost ab-

sent. When this hypertrophous process is once established, it is difficult and even impossible to subdue it. Two such cases occur to my memory now, the one occupying the vulva, the other the axilla; both unapproachable by operation, and both by prolonged pain and suffering sapping the foundations of life.

ANGEIOMA.—Next to the papillary structure of the skin I have placed the most important of the constituents of the papilla, namely, its bloodvessel; it is impossible to contemplate the pathology of the papilla cutis without recognizing the influence of its vascular element, in giving rise to those epithelial changes which we have just been considering, and the transition is consequently simple from the more compound organ, the papilla, to its elementary constituent, the capillary loop, or capillary twig, or capillary plexus, all of which may be converted by aberration of structure into more or less dense arterial or venous plexuses. But the fact which has the strongest bearing on our present subject is the aberration of development, which substitutes a vascular tissue for one, perhaps, of inferior nature, or creates an excess of vascular tissue, and thereby destroys the harmony of function and causes disorganization of the structure which it invades.

Hypertrophy of vascular tissue occurring in the skin is commonly congenital, and is, therefore, named *nævus*, and is well illustrated by the drawing No. 449, which represents a large oval-shaped *arterial nævus* developed on the back of the shoulder of an infant. The patch of vascular tissue was slightly raised, and its border, more prominent than the rest, was of a bright crimson colour and papulated, the included area being purplish in hue, and marked by the ramifications of minute venules.

But besides the congenital *nævus*, we meet with others in the practice of our profession which are

produced at every period of life; for example, there is the spider nævus, nævus araneus, consisting of a round arterial body, with a ramified rete surrounding it, suggesting the straddling legs of the creature after which it is named. Then there are those exaggerations of the capillary network of the skin, which are composed of a network of minute arteries or veins, angeiectasia, most frequently met with in the aged. And again, we are familiar with the large venous trunks, with their numerous confluent branches, which are so often seen on the nose, and particularly where that organ takes on an hypertrophous growth.

Angeiomata or vascular nævi have long furnished a fruitful field to the ingenuity of the surgeon: the knife, the cautery actual and galvanic, caustics, pressure and exciting inflammation in the mass with a view to the deposit of plastic tissue, have each in its turn had its strenuous advocate. It must, however, always be borne in mind, that a vascular nævus left to itself will frequently collapse and shrivel away completely; and I have seen a similarly happy result follow the astringent operation of liquor plumbi painted on the swelling. I need not say that these remarks apply only to the more superficial and least exaggerated forms of the disease; and it is only to treatment of less important forms still that I shall claim a few minutes' attention.

If we apply a minute drop of a concentrated solution of potassa fusa on the central prominence of a nævus araneus, in a few minutes the solution will have penetrated the little sac of blood which it contains, will have charred the blood, and the columns of blood contained in the immediately adjoining ramification. There has been no pain, no rupture of the skin; but the nævus is cured, never to appear again. For a fortnight a minute black scab will occupy the seat of the application, and then that will fall off, leaving behind it a scarcely perceptible depression.

A similar treatment is equally successful in all the forms of angeiectasia, and most strikingly in the case of venous network which accompanies the growth of the nose to an abnormal size; the venous trunk is instantly obliterated by the consolidation of its charred contents, the tributary venules immediately collapse, and sudden and complete diminution of size is perceived in the affected organ.

A further series of important and interesting pathological changes in the structure of the skin results from the abnormal growth of the integument, particularly its areolo-fibrous element. In some countries this excessive growth is so general as to constitute the normal characteristic of the people, as we see illustrated in the massive growth of the integument of the lower part of the trunk of the Bosjeman natives of Africa.

No. 450 is a photograph of a Bosjeman woman, showing a state of hypertrophy of the integument of the abdomen, gluteal region, and thighs, probably induced by habits of life and constitution. The enlargement is clearly of morbid origin, as may be inferred from the unevenness of the skin and seemingly lobular structure of the integument.

In the writings of Hippocrates we find reference made to the relaxed condition of the integument of the joints amongst the Scythians, which rendered it necessary that they should have portions of this hypertrophied skin removed in order to brace up their limbs for necessary exercise. "I will give you," he says (Sydenham Society's edition, vol. i. page 214), "a strong proof of the humidity of their constitutions. You will find the greater part of the Scythians and all the Nomades with marks of the cautery on their shoulders, arms, wrists, breasts, hip-joints, and loins; and that for no other reason but the humidity and flabbiness of their constitution; for they can neither strain with their bows

nor launch the javelin from their shoulder, owing to their humidity and atony; but when they are burnt, much of the humidity in their joints is dried up and they become better braced, better fed, and their joints get into a more suitable condition."

"Their women," he says, "mount on horseback, use the bow, and throw the javelin from their horses, and fight with their enemies"; but to effect all this Amazonian vigour, they are deprived of their right breast; "for while still of a tender age, their mothers heat strongly a copper instrument, constructed for this very purpose, and apply it to the right breast, which is burnt up, and its development being arrested, all the strength and fulness are determined to the right shoulder and arm." With a normal constitution disposed to relaxed growth, we may understand in what manner this process might be turned to good account by the Scythian ladies, without supposing the necessity of their taking their place in the battle-field. In other countries, however, the proneness to elongation of the mamma is taken advantage of by the parent as a means of enabling her to throw the organ over the shoulder for the use of the infant supported on her back.

In these cases it is the loose cellular tissue which is increased in quantity and laxity; and this state of the integument has received the name of dermatolysis, or looseness of the skin. A curious illustration of this peculiar condition of the integument is shown in the engraving, No. 451, representing Georgius Albes, a Spaniard, in the act of drawing the integument of the right pectoral region upwards to his left ear. The plate is taken from John Bell's work, who observes, "This young man had the skin on one side only of his body so relaxed that he could extend it without pain to any degree." Meek'ren reports the case under the name of "debilitas extraordinaria cutis," and says, "In the year 1657, a young

man, a Spaniard, named Georgius Albes, about twenty-three years of age, presented himself at our hospital and was seen by Van Horne, Sylvius, Gulielm. Pyso, and Franc. van der Wiel, who, grasping with the left hand the skin of the right breast and shoulder, drew it out till it touched his mouth; or, taking the skin under the chin with both his hands, he could draw it down like a beard till it touched his breast, or pull it upwards till it covered his face and eyes, or extend it still more till it touched the vertex; or, pinching the skin of the knee, he could extend it as he pleased, upwards or downwards, to the length of half a yard. The skin thus extended retracted itself again, but this was only on the right side of the body; it was a disease, and not a trick of capability of extension produced by custom."—"Consideratione dignum erat, cutem eam quæ tegebat dictis locis partes sinistras, extendi nullo modo potuisse, firmissime iis adhærentes; causam dignoscere hactenus non licuit."

A more extraordinary growth of the skin is exhibited in—

No. 461, a drawing of the thigh of a girl, 17 years of age, showing a lax form of hypertrophy of the areolo-fibrous tissue of the integument and of the derma, a state which has been termed, with some appropriateness, *relaxatio insolita*, and *cutis pendula*. The integument possesses its natural colour, but hangs in thick folds around the limb. To the touch it is suggestive of the idea of a firm elastic jelly contained in a thin membrane, and the mass vibrates like jelly when handled. The apertures of the follicles are also very greatly enlarged; in a contracted state of the skin standing up like a magnified *cutis anserina*, in a relaxed state presenting transverse slit-like openings two lines in length. The girl was diminutive in size, and of feeble constitution; the morbid nutrition of the skin began at the age of puberty, and she has been liable from

time to time to displacement of the patella from slight injury. She was under the care of Mr. Weeden Cooke, when this drawing was made by Mr. C. D'Alton, and has been successively in several of the hospitals in London.

Nos. 462, 463 are photographs of the same patient five years later, namely in her twenty-third year, when under the care of Mr. Pollock in St. George's Hospital. At this time the tumour had increased in bulk prodigiously, and the hypertrophied integument fell down in massive lobes and folds, one lapping over the other, and greatly incommoding her by its weight. Mr. Pollock removed the mass from the front of the thigh in March 1875, and found it permeated with venous trunks of considerable size. The anæsthetic used on the occasion was ether, which gave rise to excessive vomiting, and the prostration caused by the vomiting and the abundant drain of serum from the wound so exhausted her normally feeble power, that she died a week after the operation.

A similar but even more singular case is shown in No. 458, an engraving of a remarkable case of *dermatolysis*, recorded by John Bell in the third volume of "The Principles of Surgery," published in 1808. The hypertrophied skin hangs from the front and left side of the neck in long rolls, which resemble portions of distended intestine. The author narrates that "the enormous growth . . . when she opens her tattered clothes, rolls out like the bowels, one turn over another, and is at once disgusting and horrible." The disease had been five years in existence when the drawing was made, and originated in a lightning-shock, which appears to have struck the left side of her head; a soft baggy tumour arose immediately on the spot and burst, and subsequently the walls of the bag continued to grow. At a later period a portion of the tumour was removed in the Hôtel Dieu by Dessault, but without arresting its further growth. The shoulders and arms were studded

all over with "small tubercles like berries," apparently *molluscum adenosum*, but in that case ill-portrayed in the engraving. "The chief volume of the tumour begins in that part which hangs thick and baggy from the back part of the head; and its origin in the lowest part of the hairy scalp is denoted by its black colour, proceeding from the roots and stubs of her dusk hair. This coloured part indicating its origin from the scalp, is extended now as low as the shoulder; it has a firm surface, large tubercles, a scaly hardness, and a blue colour. From this descends a great and voluminous roll of skin, which hangs over the breast and belly, to the length of a yard and a half, like a bundle of intestines; and from her ear, which is elongated to a prodigious length and size, hangs another corresponding roll of skin, which, falling from the neck and face, constitutes a great part of the volume of enlarged skin, which, as she sits, hangs over her knees. . . . This immense volume of skin is thin where it hangs from the occiput, neck, chin, and shoulder, but it is thick, massy, and doughy-like at its lower part. . . . This monstrous growth is simply skin—luxuriant, healthy, extremely vascular; its pores and papillæ are enlarged, and its surface somewhat reddened; in some parts it is livid, with a surface of changing colours betwixt red and blue. Upon lifting up the rolls of the tumour and looking into their roots, the veins are seen to be as large as those of the mesentery: some of these venous trunks are as big as the thumb, tense, and gorged with blood. When she travels about on her begging excursions, she carries her tumour in a sling made of an old tablecloth, as a sower of corn carries the seed in the bag before him. When she sits down, opens her cloak, and unfolds this disgusting and horrible tumour, you can hardly be persuaded that you do not see her belly open and her bowels in motion; for the rolls of skin, fleshy and red, roll over each other as she handles them, and the slightest

handling of one fold of the tumour puts the whole into this vermicular kind of motion. The whole volume would roll over her knees, but that she contains it in her lap by putting one or both her arms around it."

No. 459 represents the same patient, Eleanor Fitzgerald, seen from the left side, showing the origin of the hypertrophied rolls in the integument of the left cheek, left ear, postauricular and occipital region, and side of the neck; the large and extraordinary mass descends to her lap, on which it rests. The spots on its surface are very probably follicular depressions.

No. 460 is a case very closely resembling that of Eleanor Fitzgerald. Its history is given by Dr. Henry Wright in the "Transactions of the Pathological Society of London for the Session 1864-65" (vol. xvi.).

The patient was subject to epilepsy, followed by mania. She has large pendulous growths of skin occupying the right half of the neck and chin, the middle of the sternum extending down to the umbilicus and the ridge of the cervical and upper dorsal vertebræ. These growths form a complicated lobular mass, which descends from the side of the face to below the umbilicus in front, and covers the shoulder and back as low down as the inferior angle of the scapula. "The skin is excoriated in several places between the folds; is more or less corrugated and partially covered with hair; it resembles somewhat that of the scrotum, more particularly on the chin and right side of the neck." The growth was first noticed when she was 14; it began on the nape of the neck and just below the chin, and has gradually increased. She died in an epileptic fit, being found dead in bed, lying on her face.

The analogy between these cases lies deeper than the mere surface. Eleanor Fitzgerald received a violent nervous shock from lightning; whilst epi-

lepsy may be regarded as a cause of nervous shock equally potent with lightning. In both cases it is evident that the trophic nervous system must have experienced serious injury.

Since this course of lectures was delivered, I have had the opportunity, through the kindness of Mr. George Pollock, of St. George's Hospital, of adding to our collection, in addition to Nos. 462, 463, and 460, the photographs 455, 456, and 457.

No. 455 is a copy of Virchow's remarkable case of "fibroma molluscum," taken from the plate forming the frontispiece of his work on Tumours (1863). The patient was a woman, 47 years of age. The large tumour measured forty-eight inches in circumference; it was removed by Dr. Heyland, of Guben, and weighed upwards of thirty-two pounds. Nine years previously to the operation it was as big as the head of a foetus. Virchow notes the presence of small tumours on the surface of the greater one and around its base. To the touch the mass was soft, almost fluctuating. In structure the large tumour was composed of a succulent connective tissue, and had its chief seat in the subcutaneous web of the panniculus adiposus; its substance was traversed with fibrous bands, forming the boundary of the areolæ, and giving support to its blood-vessels, which were of large size. The smaller tumours were developed in the corium; some in its deeper layer, but the majority in its superficial stratum.

Nos. 456, 457 are illustrations of molluscum fibrosum, assuming in the large tumours the lobulated and pendulous form described by Alibert under the name of "dermatolysis." The photographs represent a front and back view of a woman, aged 33. The morbid growth made its first appearance in childhood; and at the time of admission into hospital, under the care of Mr. Pollock, there were more than one hundred tumours on the skin, ranging in size from that of a split pea to that of a walnut, and

three of large size growing respectively from the nape of the neck and adjoining part of the scalp, from the top of the shoulder, and from the neck—all on the right side. The tumour springing from the nape of the neck was as large as a melon, measuring six inches in length, seven in breadth, and twelve in circumference; that on the shoulder grew from a base extending from the spine of the scapula to three inches below the clavicle; and that from the side of the neck had a base extending from over the mastoid process to four inches below the top of the sternum. This latter tumour assumed the form of a broad, thick, and lobulated pendulous flap, eighteen inches long, descending between the mammæ to below the umbilicus, and by its bulk and weight pushing the right mamma aside. The colour of these large tumours was dark, their surface coarse and rough and permeated with follicles, which exuded, when squeezed, cylinders of sebaceous substance resembling ascarides. The hollows of the folds were moistened with a secretion of unpleasant odour, and the general sensibility of the tumours was benumbed. The large tumour was removed by Mr. Pollock on the 15th of March, 1873; and at the end of four months there was no indication of further growth. It weighed thirty-eight ounces; its base measured eleven inches by three; it was extremely vascular, and the base exhibited the cut cylinders of several large veins. At the present time, namely July, 1875, this patient is alive and well.

The pathological conditions present in the foregoing cases—the hypertrophy of the areolo-fibrous tissue, the infiltration of its cells, the extended growth of the integument, the increased magnitude of the apertures of the follicles, and the enlargement of vessels, particularly the venous trunks—are all present in those thickenings and hypertrophies which are occasionally met with in the nose.

No. 465 is a model illustrating areolo-fibrous hypertrophy of the integument as it is sometimes met with in the nose. The nose presents the appearance of a lobulated mass, but is considerably reduced from its original size by the removal of the largest of its lobes; at present it hangs down below the level of the mouth and presses against the lips. The large central and most dependent lobe measures two inches and a half in breadth by nearly two inches in length, and is surrounded by upwards of two dozen lobulated masses ranging in bulk between two lines and one inch in diameter. The lobules at the root of the nose are reduced to the size of simple tubercles, but from this point downwards they increase considerably in bulk, and at the base of the mass may be seen a number of large veins. The general tint of colour of the tumour is purplish; the lobes are smooth and tense, and the surface is indented every here and there by obliterated follicles. Guerin names the affection "hypertrophie des glandes sébacées du lobule du nez." How whimsical are our names.

No. 464 is another specimen of this curious affection; the nose is composed of one large central tumour which hangs down to the level of the chin, completely closing the mouth, and two small lateral lobes. The hypertrophy of the apertures of the sebiferous follicles is very remarkable, several of them ranging between one line and one line and a half in diameter. The greatest circumference of the tuberous mass in this case is eleven inches and a half, nearly a foot.

No. 466 is a mount containing two photographs presented by Dr. Fayrer, representing examples of spargosis of the nose. The growths are remarkable for their pedunculated and flask-like figure, one springing from the extremity of the organ, the other from its ala.

Portions of the nose, similarly affected and re-

moved by operation, are shown in preparations of the "General Pathological Series," numbered 2284, 2284A, 2285, and 2286. The hypertrophy of the integument is complete, involving the apertures and cavities of the follicles together with the solid structures, as is strikingly exhibited in Nos. 2284 and 2285.

A similar form of tegumentary hypertrophy is also met with in other extremities of the body, of which the nose may be regarded as one; for example, in the penis, scrotum, clitoris, nymphæ, legs and arms. The Greek appellation *spargosis*, signifying a state of swelling, has been very appropriately applied to this affection; thus, we can conveniently employ the terms *spargosis nasalis*, *spargosis penis*, *scrotalis*, *cruralis*, *brachialis*, and so forth. The kind of swelling intended to be distinguished by this word is a condition of hypertrophy involving principally the areolo-fibrous tissue, but nevertheless one in which, however, the vascular element of the organ likewise participates. In some instances the hypertrophy may be limited to the integument and subcutaneous connective tissue alone, whilst in others the morbid action is also propagated to the deeper areolofibrous tissue. This is especially marked in the instance of the lower extremity, where the diseased limb often attains a prodigious bulk, the massive integument overlaps the instep, and the leg, losing its human form, has been compared to that of the elephant; and as we owe the suggestion of the "elephant leg" to the Arabians, the disease has received the name of *Elephantiasis Arabum*. But as we cannot reasonably apply the term "elephant leg" to an affection of the nose or of the penis and scrotum, some other word such as *spargosis*, which is excellently suited to the purpose, is rendered necessary. For the "elephant leg" itself, we possess a happy synonym in the term *boucnesia*, which signifies "huge or monstrous leg," and as this huge or monstrous leg is endemic

in certain countries, it has likewise been named after those countries; for example, "Barbadoes leg" and "Cochin leg." I need hardly remind you that the term elephantiasis given to the local affection is an ignorant piracy on the real and genuine elephantiasis of the Greeks, a constitutional disease of a much more serious and totally different nature, a disease as Aretæus observes, so much greater than the other diseases as the elephant is bigger than the rest of animals; hence the grandeur of the appellation.

No. 467 is a photograph, illustrating spargosis of the penis in a negro of the West Indies. The organ has acquired a huge and extraordinary figure, it is lobulated above and curved at the extremity, and in the latter situation is roughened by warty granulations. This photograph was presented to the dermatological collection by Dr. Thomas Nicholson of Antigua.

No. 468 is a model, showing spargosis of the penis and scrotum. The surface of the tumour is marked by numerous pits corresponding with the apertures of hair-follicles, and its extremity is nodulated by inversion and irregular growth of the margin of the prepuce, the inversion being due to the unyielding nature of the frænum. The aperture of the prepuce is seen to the left of the middle line. This model together with No. 469 was presented to the museum by Dr. Voillemier of the Hôtel Dieu in Paris, to illustrate a remarkable form of spargosis, as well as the successful results of operation, and was accompanied with a pamphlet entitled "Elephantiasis du Fourreau de la Verge et du Scrotum," 1873, which is deposited in the library.

No. 469 is a model of the same case four years after the operation. The patient was a French artisan, 29 years of age, and the disease had been in progress for seven years. It began by attacks of inflammation of the integument at the root of the penis,

attended with itching and an eruption of follicular pimples, probably an eczema. These attacks occurred regularly, spring and autumn, and were accompanied at their commencement with slight fever. They lasted for about a fortnight, and when they ceased left a permanent thickening of the integument behind them, the thickening being considerably increased after each attack. The man was of lymphatic temperament and had suffered from ague on several occasions, but was otherwise healthy.

The operation was performed on the 2nd of July, 1868, and the wound was completely cicatrized on the 13th of August; the operation lasted thirty minutes, and the mass removed, weighed on the following day after a considerable loss of its infiltrated fluid, exceeded six pounds. In structure it was found to be composed of a stroma of fibrous tissue, greyish in colour, elastic and tough, and infiltrated with serum. Dr. Voillemier makes some good practical remarks on the advantage of avoiding undue separation of the integument from the deeper-seated parts in the surgical manipulation of these cases.

No. 470 is another photograph presented by Dr. Fayrer, of a patient upon whom he operated successfully. The case was one of spargosis scrotalis, enveloping and submerging the penis. It is pedunculated in its form and resembles a huge flask, almost touching the ground when the patient stood upright. A large slit in front of the tumour represents the outlet through which the urine made its escape, and the surface of the scrotum is thickly tuberculated. The base and upper part of the tumour are leucopathic, and blotches of leucasmus are seen on the inner side of the right thigh, on the shins, and on the tips of the toes. When removed and drained of a portion of its fluids, the tumour weighed 110 pounds.

No. 471 is the photograph of a Chinese affected

with spargosis of the scrotum, back of the thighs, calves of the legs, and ankles. The ponderous scrotum is seen both in front and at the back of the figure, and obliges him to stand with his legs apart. The growth on the back of the thighs has the appearance of the buffer of a railway carriage, and that on the calves of the legs is composed of large lobulated masses.

No. 472 is the photograph of a Chinese actor, afflicted with spargosis cruralis, or elephantiasis Arabum; the boucnemia tropica, or Barbadoes leg. It was executed and presented by Major Watson of the Anglo-Chinese force of Ningpo in 1871.

Dr. B. D. McCartee, an American medical missionary, under whose care the patient was placed, reports of him as follows:—"Li-käi-tä, aged 35, eighteen years ago suffered repeated attacks of quartan ague. While under the influence of one of these attacks, he was obliged to walk the whole day and wade several streams chilled with melting snow. On reaching his home the fever was aggravated, the legs became inflamed, swollen, and ulcerated, and the inguinal glands enlarged. The inflammation of the legs was subsequently repeated at intervals, and at each recurrence the limbs increased in dimensions. At present his health is moderately good; the fever, however, returns from time to time, particularly in the rainy season, and the walk home from the hospital at his first application revived the fever and local inflammation. The disease is common at Ningpo, but rarely so well marked as in the present instance; it would seem to be of malarious origin, and the Chinese believe it to be occasioned by wading in the mountain streams chilled by ice.

In cases of spargosis, as they come before us in this country, the increase of the growth by successive attacks, and the presence of a febrile exacerbation with each attack, would seem to be the common mode of progression of the disease. An

unmarried lady, aged 30, who has suffered strumous abscesses in her early life, and has since become the victim of lupus dispersed over the general surface of the body, and spargosis of one leg, recounts the number of attacks of inflammation of the leg which she has in the year, and states that she always experiences, as a warning of their occurrence, a sensation of heaviness, sleepiness, and chill, and that to these symptoms succeed an inflammation of the skin of the leg which she terms erysipelas. In the same way, ague and fever are constantly spoken of in association with the spargoses and elephant legs of other climates, and point to a miasmatic, and, probably, paludal cause as their origin.

The therapeutical treatment of areolo-fibrous hypertrophy of the integument was evidently in possession of the Scythians described by Hippocrates. We might not at the present day approve of the process of the operation, but the result was obviously all that could be desired: the substitution of a firmly contracted cicatrix for loose folds of relaxed integument. One of the most elegant and scientific operations of modern times, namely, that of Dupuytren for prolapsus ani, since applied in so many useful ways, was nothing more; although we cannot imagine Dupuytren drawing his inspiration from rude surgical processes in use amongst nomadic races upwards of two thousand years ago.

Dr. Voillemier reminds us of the prodigious quantity of serous fluid which issues from these infiltrated masses, and it is difficult to say in such a case where the drainage would end.

The names of several distinguished surgeons in this country and elsewhere are associated with the removal of tumours of areolo-fibrous structure from the nose and from the scrotum, and in the museum may be seen such a mass, removed by Mr. Liston, which weighed nearly fifty pounds.

Boucnesia, or the elephant leg, has been treated with great success in our own and other countries by the ligature of the main artery of the limb, and the success of the treatment has served to place this amongst our standard operations. What I have already said with regard to ague and fever must remind us that the disease cannot be considered as purely local, but is subject to exacerbations and possibly to relapse, from constitutional causes.

Here, let us pause for a little, and take a brief retrospect of the ground we have just travelled over, of the concatenated progression of degrees or stages of hypertrophous growth which have led us on almost imperceptibly from a state which, in the Bosjeman women, might be pronounced as normal, to the huge monstrosity of the "elephant leg"; first, the loose and elastic integument, the dermatolysis of the Spaniard, George Albes; next, the curious and remarkable growth and relaxation of the integument seen in the cases recorded by John Bell, Virchow, Dr. Wright, and Mr. George Pollock, and in that under the care of Mr. Weeden Cooke. Then our attention was directed to extraordinary examples of monster noses, and afterwards to spargosis of the penis, of the scrotum, and of the lower limbs. Where, we might ask, could we, if we wished, draw a line of separation between these several examples of hypertrophy of the areolo-fibrous tissue of the integument? They form from first to last a progressive onward movement of one and the same pathological process. In our etiological review of them, we might, it is true, be able to point out certain not very important differences; for example, the endemic nature of one, the traumatic origin of another, namely, that of Eleanor Fitzgerald; and the malarious relations of boucnesia tropica.

But I have now to carry your attention back to an hypertrophy affecting the same tissues as those involved in the preceding cases, but more restricted in extent, and superficial in its seat; attacking, in fact, the true skin, and rarely sinking so deeply as the subcutaneous tissues. The simplest example we can take of this hypertrophous development of the skin is the acrochordon, a minute outgrowth of the superficial portion of the derma, sometimes cylindrical, sometimes sessile, and sometimes pyriform in figure and pedunculated. It is usually regarded as a wart, and is to be found in our books under the name of *verruca acrochordon*; but it differs from a wart very widely in structure, and, as you will see, occupies a different place in our classification. A wart is a bundle of elongated papillæ cutis, each clothed in a thick epidermic sheath, and producing a horny prominence. But the acrochordon, although perhaps excessively minute, is an outgrowth of the skin itself, possesses its proper nutrient blood-vessel, and is composed principally of connective tissue. These acrochordons are usually found on the feeble integument of elderly persons, and are very common on the neck; but they may likewise be met with on younger skins wherein the nutritive process is not healthily controlled. A glance at the neck of the first old lady you meet with will supply you with a complete illustration of the acrochordon.

Acrochordons are frequently pear-shaped and pouch-shaped. From the nature of their structure, they are necessarily soft in texture, and if they were to grow to any size, they would be termed mollusca or molluscous, that is, soft, tumours. Molluscum is an outgrowth of the skin, constituting a small tumour, soft in texture, sometimes sessile, sometimes pedunculated, and often pendulous. The form of molluscum which we are now considering is composed pathologically of loose connective tissue, rarely reaching any considerable density, and very mode-

rately supplied with blood-vessels. This kind of tumour is commonly denominated molluscum simplex, or molluscum areolo-fibrosum, to distinguish it from another kind of smaller size, which contains within it a sebaceous gland in a state of hypertrophy, and is more correctly distinguished as molluscum adenosum. Like some other disorders of the sebiparous glands, this latter affection labours under the imputation of being contagious, and has also received the name of molluscum contagiosum.

No. 452 is a model of the arm of a woman 50 years of age, exhibiting the simple form of molluscum, molluscum simplex, or molluscum areolo-fibrosum. The forearm on its flexor side, and particularly at its middle, is studded with fifteen or twenty small tubercles, very slightly redder than the surrounding integument, and ranging in size from two lines to nearly six lines in diameter; that is, from the size of the hemisphere of a small pea to that of a small hazel-nut, the largest being prominent about a quarter of an inch. And in the spaces between the tubercles are a considerable number of minute papules, these latter being particularly conspicuous on the ball of the thumb. The tumours bear the external evidence of being that which they are known to be pathologically; they are soft to the touch, and composed of a fine and loose areolo-fibrous tissue, being, in fact, an hypertrophy of the connective tissue of the upper stratum of the corium. This pathological state is also illustrated by the fingers: the areolo-fibrous accumulation has caused a swelling of the first three fingers; the ends of the fingers are broader than natural; the lines of flexion of the third phalanges are obliterated; and there is a soft, flabby, compressible, and remarkably-prominent enlargement of the front of the middle finger. The case was under the care of Lailier, but not retained in hospital in consequence of the hopelessness of cure.

No. 453 is a model of the thoracic region of the back, showing a simple tegumentary growth or molluscum. The principal tumour is lobulated on the surface; a yellowish fluid secretion exudes from between the lobules; and at its upper part is a pedicle of the nature of cheloma. The smaller tumour, above the principal one, is somewhat pedunculated and nodulated on the surface—an incipient stage of lobulation. Scattered around these tumours are a few minute growths of a similar nature, and a few hyperæmic spots indicating the vascular congestion which precedes their formation. The minute mollusca are simple smooth outgrowths, but one amongst them already exhibits a tendency to nodulation.

No. 454 is another example of the same disease; it is the photograph of a negro, aged 45, affected with tumours of *molluscum areolo-fibrosum*, distributed over the whole body, more especially the back of the trunk. They range in size between that of a pea and a pigeon's egg, and reach in prominence to about an inch; some are firmly implanted in the skin, others are more loosely attached, and some are pedunculated, as in the instance of the three large tumours seen on the forearms and back of the left hand. They made their first appearance at the age of puberty, and have continued to increase in number and size ever since, their growth being accompanied with a pricking, burning, and shooting pain. Their structure is that of a coarse areolo-fibrous tissue, infiltrated with a colourless albuminous fluid; and the tendency to the formation of the disease is evinced by the development of tumours on any slightly-injured spot or wound of the skin; and further, by the occurrence, during the last four years, of *spargosis* or *elephantiasis Arabum* of the genitals. The photograph, with a description of the case, is published by Dr. Izett W. Anderson, of Jamaica, in the "Journal of Cutaneous Medicine," vol. i. 1867, p. 60.

Pedunculated cutaneous tumours, constituting *pendulous mollusca*, will also be found in the "General Pathological Series," in the preparations numbered 2287 to 2290; two of these are smooth on the surface, the others are lobulated.

Sometimes, in lieu of being soft and sessile or pedunculated, tumours are found which are composed of a dense white fibrous tissue, and are hard in texture, their structure partaking of the character of the deeper rather than of the superficial part of the derma. In such a case we drop the term areolo, as it occurs in the term areolo-fibrous, which calls to mind the softness of areolar or connective tissue, and name them fibrous tumours, the word fibrous conveying with it the idea of hardness and density of tissue. Of this latter description is the case numbered 488, which is a model of the face, neck, and breast of a woman affected with a remarkable form of fibromatous growth termed by Guibout "tumeurs fibro-plastiques." The face and neck, together with the front of the chest, are nodulated all over with cutaneous tumours of the average diameter of half an inch, the tumours resulting from hypertrophy of the fibrous tissue of the corium. On the face the tumours are smaller, reddish, and neither so prominent nor so well defined; and there is evidence of chronic inflammation, possibly eczema, of the eyelids. On the neck and chest the tumours are:—some more defined and prominent and red; others paler and more deeply seated; the prominent tubercles show signs of inflammation, and, in two or three places, of superficial ulceration. The fibrous tissue of the whole of the right mammary gland is involved in the disease; and around the circumference of the gland are seen numerous well-defined tubercles, which are connected with the morbid gland-structure by subcutaneous cords. This is especially the case along the upper segment of the gland; and from

this segment there radiate six or seven of these subcutaneous cords, which terminate in rounded tubercles. From two of the latter the subcutaneous cords proceed upwards to the tumours in the neck, which form three prominent cord-like and tuberculated ridges; and from this arrangement there results a well-marked *cheloma* of somewhat complicated figure. The disposition of the two vertical cervico-mammary cords is worthy of close observation: the narrower is partly intercepted by a round tubercle, the broader is enlarged in the middle, and between the two is a small round tubercle, seemingly suspended by its cord from the transverse cervical prominence. This model serves to confirm the recognized identity of simple fibroma with cheloma, and may be taken to illustrate the two affections. A detailed report of the history of the patient is published in "L'Union Médicale," No. 86, for July 21, 1868; and also in the third volume of the "Journal of Cutaneous Medicine," p. 180.

The preceding case leads us by an easy transition to another form of fibrous tumour of the integument which has received the name of cheloid, cheloides or cheloid, and which may likewise be termed cheloma. In its pathological nature it is an hypertrophy or hyperplasia of the fibrous tissue of the corium; this dense tissue invades the superficial portion of the corium, and the papillary layer with its plexus of bloodvessels is thinned and gradually obliterated. It may occur in any part of the skin, but is most commonly met with in that which is in close proximity with a bone; for example, the integument of the sternum, and it has a further tendency to increase by spurs or shoots from its circumference. These offsets have been commonly denominated roots; hence, the term cheloides radiciformis, and as suggesting the legs of a crab, have originated the name by which the disease is known, $\chi\eta\lambda\eta$ being the Greek for a crab's claw.

We are fortunately somewhat rich in our illustrations of this curious affection:—

No. 473 is a coloured lithograph of a man, aged 48, presenting a chelomatous growth on the breast, crossing the sternum, a common locality of this disease. The growth bears some resemblance to a bird with its wings extended, and has been thought by the ignorant to be an animal, for example, a toad, which had buried itself in the flesh. The ridge-like branches or spurs around the circumference of the growth have been called its roots, hence the term “*cheloides radiciformis*”; and some colour has been given to the idea of roots by a common mode of extension of the disease, namely, by the formation of a cord-like thickening of fibrous tissue which shoots out in the direction of an isolated tubercle, and after a while becomes identified with it; this process is shown in the approach of the thick spur on the right breast towards an isolated tubercle seen at a short distance from its point. The upper and lower border of the left segment of the growth are rounded, and stand out from the integument, while the surface of the growth is marked by a network of cords of white fibrous tissue, coated over by a velvety vascular layer. The disease had been seven years in existence at the time the drawing was made, and commenced by four isolated tubercles which gradually grew together and coalesced. At present it measures nearly four inches in length by three in breadth, and between two and three lines in thickness.

No. 474 is a water-colour study of the presternal *cheloma* of the above patient.

No. 475 is a wax cast of the *cheloma* of the same patient; and—

No. 476 a plaster cast of the *cheloma* of the same patient.

No. 477 is a model of the same case, executed by Baretta, from a mould taken by myself.

No. 478 is a plaster cast of the fibular side of the right knee of the same patient, showing three rounded tubercles measuring nearly half an inch in diameter. The upper tubercle is united with one of the lower tubercles by a prominent columnar ridge, *cheloides cylindracea*, the two tubercles being upwards of two inches apart. The remaining tubercle is isolated.

No. 479 is a wax cast of the same subject.

No. 480 is a plaster cast of the radial side of the forearm of the same patient, showing two isolated *chelomatous tubercles*. The upper tubercle is square-shaped, the lower oval in figure; they are situated at about two inches apart.

No. 481 is a wax cast of the front of the chest of a man, 44 years of age, showing a presternal *cheloma* in a retrogressive state. It resembles in figure a sheaf of wheat, and the thin, smooth, velvety layer which covers its surface is reddened by a network of minute venules. The growth had been eight years in existence. During the first two years it advanced gradually in size, during the next five years it remained stationary, and subsequently subsided slowly.

No. 482 is a plaster cast of the same case.

No. 483 is a plaster cast of the shoulder of a gentleman, aged 41, presenting an oblong and somewhat crescentic tubercle of *cheloma*, an inch in length by one-third of an inch in breadth, and about one line in elevation. The *cheloma* had been in existence for five years, and was developed originally by three separate tubercles, which subsequently became fused into a single mass. A daughter of this gentleman had her back and chest covered with small *chelomata* of traumatic origin, being developed on cicatrices left by the eruption of acne.

No. 484 is a wax cast of the same.

No. 485 is a plaster cast of part of the podex of the same gentleman, presenting two large tubercles united by an intermediate fibrous band, and giving

rise to a tumour of a dumb-bell figure. The larger tubercle measures more than half an inch in diameter, and the space between the tubercles is of the same extent.

No. 486 is a wax cast of the same.

No. 487 is a plaster cast of part of the face of a boy, showing a cheloma which has grown in the bed of an abscess, *cheloma traumaticum*, *cheloides spuria*. The tubercular ridge measures an inch and a half long, and is somewhat crescentic, being half an inch in breadth at the middle and tapering towards the ends.

Cheloma is further illustrated by preparations 2283A and 2283B in the "General Pathological Series," the latter being an example of traumatic cheloma or cheloides.

THERAPEUTICAL CONSIDERATIONS.—We have only to pass in review the prominent examples of areolo-fibrous hypertrophy,—namely, acrochordon, spilus, molluscum, fibrous tumour, and cheloma, to feel assured that we have to deal with aberration of nutrition of the skin in a greater or less degree, and consequently, with a pathological condition of the organ, which calls for constitutional as well as local treatment. In the instance of acrochordon we have the failing of an elderly skin to which we must restore youth, in the same affection occurring in younger persons a failure of strength which requires invigoration. There is no more powerful means of supplying health to the skin, whether young or old, than the abundant use of soap and ablution; this should be a process of daily use, while the cold bath and the Turkish bath, with the manipulation called shampooing, are all of great value; and this treatment is serviceable in the whole of the examples before us, because in all it is important to raise the health of the skin to the highest standard possible.

Locally the acrochordones should be snipped off

with the scissors, but where they are too minute for this operation, an astringent lotion might be sponged on the affected skin once or twice a day, such as one of chloride of zinc ten grains to the ounce, or of perchloride of mercury, one or two grains to the ounce. Where the scissors are objected to, the little growths may be removed like warts, by strong acetic acid or by a strong solution of potash, and they are sometimes much benefited by touching with liquor plumbi.

Spili or cutaneous nævi are best got rid of by means of a solution of potassa fusa. A minute drop of the caustic fluid is to be deposited on the summit of the little tubercles, and this, in the course of ten or fifteen minutes will diffuse itself throughout the mass, the only care being to limit the extent of its diffusion. Where, however, the nævi are of greater extent, it may become necessary to have recourse to the knife.

Areolo-fibrous mollusca are easily removable by the knife, but when of small size may be shrivelled up and dispersed by applications of liquor plumbi, or pencilling with the compound tincture of iodine.

Such a case of fibroma of the skin as No. 488, it would be difficult to deal with; paintings with iodine would seem to be our only resource, but in less extensive cases, a simple unirritating plaster on wash-leather might prove advantageous.

Cheloma comes more frequently under treatment than other forms of areolo-fibrous and fibrous tumours and offers great temptation for surgical interference by operation, but the result of operation is generally unsatisfactory, and in fact, there is nothing more carefully to be avoided in these cases than operation by knife. Caustics and irritants are all equally objectionable, and the best results are to be obtained by the combination of iodine and plaster. I, myself, make use of a solution of one drachm of iodide of potassium, with an ounce of soft soap and a like quantity of spirit of wine well rubbed together. This solution should be painted on the

tumour, and covered over with the emplastrum plumbi spread on washleather, and the dressing so applied should not be disturbed for a week, and then only to be replaced by one of a similar kind. If the iodine application be found irritating, then the lead plaster should be used alone and left on as long as it is inclined to adhere. I have known cheloids cured by this process, and I believe it to be the only one which offers any real prospect of amendment.

The forms of hypertrophy which we have heretofore examined are all of a primary character; they begin as hypertrophy and undergo no further change beyond that of increase of bulk. But there is another form of hypertrophy which has received the name of fungus or mycosis, that is consequent on an exudative affection of the derma, possibly vesicle or pustule, and forces it way through the epidermis from the stratum beneath, presenting itself on the surface as a small rounded prominence bathed in exuding secretion. This form of exuberant growth is particularly associated with the nature of organization of the negro skin, and is met with especially in a zymotic eruption common to that people, and termed pian or yaws. Pian may occur at any period of life, but is common among children as an eruptive disease, appearing like measles or variola only once in a lifetime. In this case, the pustule throws up a granulated vegetation from its base, which is variable in point of size, generally attaining the size and appearance of a small raspberry, and thence named framboesia.

In the last issue of the plates of the New Sydenham Society, there is one which is termed Framboesia, and which exhibits an abundant eruption composed of rounded papulæ ranging in size from that of a pin's head to a small prominent fungous mass nearly three-quarters of an inch in diameter. The majority of the papules are of the smaller kind, a few are as large

as a pea, and two only, situated on the hand, approach to the larger dimensions to which I have referred.

The eruption is displayed on the forearm, hand, and sole of the foot; and on a magnified blotch in a corner of the plate is shown the manner of development of the eruption, commencing as a pustule on an inflamed base, subsequently converted into a black crust, then proceeding on to globular fungous masses of a bright red colour, sometimes smooth and sometimes granulated or lobulated on the surface and apparently moistened by exudation. At a later period, when the fungous growths have disappeared, their position is marked by a deep brown pigmentary stain.

The term *mycosis* would seem to have originated with Alibert, who has handed down to us three forms of the disease, which he terms *mycosis framboësioides*, *mycosis fungoides*, and *mycosis syphiloïdes*. *Mycosis framboësioides* is founded on the fungous excrescence of *framboësia*, or yaws; *mycosis fungoides* may possibly include fungous excrescences not allied with *framboësia*, nor with any other known affection; whilst *mycosis syphiloïdes* must be left to be included with the other cutaneous manifestations of syphilis, and cannot be regarded as a substantive disease. That Alibert's views were very undefined with regard to *mycosis*, may be seen by his plate of "*mycosis framboisé*," which would appear to be a chronic and perhaps neglected eczema of the scalp, forced into a state of exuberant granulation by maltreatment.

Some notion of the characters assigned to *mycosis* and *framboësia* may be formed from an examination of No. 489, a model of the inner side of the ankle and foot, on the surface of which are scattered a number of small fungous prominences. Vidal, who treated the case, calls it "*mycosis fungoides*"; while Hardy terms it "*melanosis*"; but it is unfortunately unaccompanied with history, and its true nature cannot therefore be defined with certainty. The

largest prominence is a moist fungous growth, of the size of a hazel-nut or small raspberry, and somewhat constricted at the base, where it is encircled by an ulcerated fissure and thin edge of integument. Three smaller prominences of a cluster of four, situated just below the inner malleolus, are in process of undergoing a similar change; the border of the ulcer is defined, while the centre is white and epidermic in one, black apparently from an effused clot of blood in another, and white with a black centre in the third; the core in these papulæ being the summit of the future fungus. In the fourth papule of this group the epidermis has not yet given way, and its aspect is bluish and transparent. Two papules somewhat higher up upon the leg are coated over with a thin exudation crust. There are two small pigmentary spots on the border of the foot, the only trace of anything of a melanoid character, and a papule encrusted with a black scab over the internal saphenous vein. I must hope that in course of time other examples of this curious affection may be added to our collection, and that we may be able to form a more clear idea of its pathological nature, and therefore of the appropriate treatment.

DISEASES OF INNERVATION.—Diseases or derangements of innervation present themselves to our notice sometimes in the form of an irritable condition of the skin, which is termed pruritus and prurigo; sometimes in the form of pain or neuralgia, which has likewise been designated dermatalgia; sometimes as exalted sensibility or hyperæsthesia, and sometimes as deficient sensibility or anæsthesia. In all these instances, the seat of disorder is the network of cutaneous nerves which is hidden from view; and the morbid phenomena may be present without any visible sign of their being. They may be present likewise as an element of other cutaneous diseases, or they may exist independently; and it is only in

the latter respect that they fall within our notice in this group.

The Greeks called the itching diseases of the skin *psora*, which included eczema, the scabies of the Latins, and chronic dry eczema or psoriasis. But we occasionally meet with itching in which there is no visible change in the appearance of the skin, and that we denominate *pruritus*, that is, simply "itching"; thus we may have *pruritus scroti*, *pruritus vulvæ*, and *pruritus ani*, and that curious kind of general *pruritus* which is excited by the cold bath, and which in some instances renders ordinary ablution impossible. The *pruritus* of eczema is principally due to local disturbance of the tissues of the skin, but is also consequent on constitutional causes; and *pruritus* without local manifestation of disorder is probably referable to constitutional causes alone.

But the affection of the nervous system which gives rise to *pruritus* may likewise alter the nutrition, the circulation, and indeed the whole of the functions of the skin, and the morbid state thereby induced is termed *prurigo*. It is obvious therefore that, according to the degree of affection of the nervous system, we may have developed the simplest and most trivial form of itching—one which is sufficiently expressed by the word *pruritus*, or a more intense and permanent form, which is denominated *prurigo*.

I have previously alluded to the mutual relations of all the structures of the integument with each other, and the almost impossible occurrence of derangement of any one of these without a responsive echo on the part of the rest; and this remark is strikingly illustrated by disorders of innervation of the skin. A functional disturbance of the nervous system may give rise to such an alteration in the cutaneous circulation as to constitute an *erythema*; there will also, very probably, be *pruritus*; and pa-

resis of the capillaries may be associated with spasm of the muscular structure of the skin, producing the bloodless wheals of *urticaria*. Or the nerve-disturbance may be such as to alter the endosmotic action of the cells of the tissues, and so give rise to infiltration and exudation. Considerations such as these have led some dermatologists to expand the group of neuropathic affections of the skin, by admitting into it *urticaria* and herpes, while the erythematous relations of *urticaria* and the phlyctenoid relations of herpes zoster have thus far detained them in the respective groups of erythemata and bullæ.

The separation of these diseases from the groups in which they have heretofore been placed must necessarily be attended with force, for the reason I have just given, namely, that the nerves are always more or less implicated in every affection of the skin; and in a special neuropathic group it would be desirable to limit its members to such as evince their neurotic dependencies primarily and essentially, if, indeed, not exclusively. Thus, although we know that a nerve-disturbance is substantially the cause of herpes, yet sensation or pain may be of a very trivial character, or entirely absent; whereas, in pruritus and prurigo, a morbid sensation is the most essential characteristic of the disease.

Prurigo is very commonly known as a disease of elderly persons, and has thence received the designation of prurigo senilis. At its first invasion, and, in some persons, throughout its course, there is nothing visible in the skin, while in others a disturbance of nutrition and circulation of the integument is very apparent; in a well-marked example of prurigo we should expect to find the skin thickened, stiff, hard, dry, discoloured, papulated, and excoriated; the thickness, stiffness, hardness, and dryness are evidences of defective nutrition and passive infiltration; the discoloration proceeds from derangement of the pigmentary function; papulation

results from congestion and infiltration of the follicles; and excoriation, from the application of the nails to relieve itching.

The pathognomonic characteristic of prurigo is, however, pruritus; for the other signs of an unhealthy skin may be present in any elderly person; or, in a state of the skin corresponding with that of an elderly person, without itching. And the itching presents a variety in its manifestation, and a more or less extensive relation with the general nervous system. Stinging, burning, pricking, creeping, are amongst the terms applied to the itching, and, from a comparison to the stinging of ants, "formication." The implication of the nervous system in general, to a greater or less extent, is shown by the agony which is sometimes produced by the itching, and which occasionally amounts to a state of phrenzy. The neurotic relations of this symptom are also evinced by their frequent control by states of mind of the individual.

The tendency to bleed from the abrasions caused by the nails must also not be passed over without notice: little black scabs of blood are generally found covering the summits of the pimples when they have been scratched, and excoriations produced by the nails and encrusted with blood are to be seen in various situations. There can be no doubt that the skin often bleeds more readily than usual, and that the incrustations of desiccated blood must not always be taken as a proof of the violence of the scratching; the cuticle peels off more easily than in the case of a healthy skin, and the stasis or congestion induced by nerve-lesion more readily furnishes blood.

As I previously observed, it is the congestion and infiltration of the follicles which produce the small prominences or papulæ of the skin; and it was this lesion which led Willan to place prurigo in his group of papulæ. But the student of dermatology would

form a very inaccurate idea of prurigo if he were to seek for it solely in the presence of papulæ. A more practical picture of the disease is to be found in the itching or pruritus without obvious or apparent cause; the neurotic character of the itching; the altered appearance of the skin, arising from defective nutrition; its readiness to bleed when scratched; and, last of all, the papulation, which is as frequently the consequence of the scratching as its cause.

Pruritus is not an affection to be easily illustrated by drawing or model; and it may be mentioned here that the majority of instances of pruritus scroti, vulvæ, and ani are in reality cases of chronic eczema, and not the purely neurotic affection which we are now considering. We have as yet no good example of prurigo in the dermatological collection, but the model, No. 490, illustrates very fairly the prominent signs of the affection. Model of the foot and part of the leg, illustrating prurigo, as evinced by the numerous scratches made by the nails for the relief of itching. The integument is marked with prominences ranging in size from little more than one line to nearly half an inch in diameter, round flat tubercles, very little elevated, consisting of indurated integument, and more perceptible to the touch than to the eye, the largest of the tubercles being situated on the dorsum of the foot; and the skin has the dry, rigid, and discoloured appearance which is common in prurigo.

If we assume, as we must necessarily do, pruritus to be the predominant symptom of prurigo, accompanied with the development of papules and hæmorrhage from those papules when scratched, we have a very fair word-picture of the eruption of children described under the name of lichen urticatus; "lichen," in modern dermatological language, implying a pimple, and "urticatus" indicating the whiteness of the pimple when rubbed or scratched. The pimple is likewise generally covered with a black

scab of desiccated blood, and is very itchy in its nature, disturbing the rest of the child who is unfortunately attacked with it; moreover, the disease often persists obstinately for several years in spite of every treatment. I found such a case, named "prurigo" by the practitioner in attendance on the patient, and was struck with its analogy to the prurigo of elderly persons. Lichen urticatus, or, as it might likewise be named, prurigo infantilis, is rare in the adult, in whom I have only noticed it in a few instances.

But we have another disease which is met with in young persons of the female sex, and in adults of both sexes, which bears so close an analogy with prurigo that it calls for attention in this place. In the case in question, there is pruritus, often severe, but sometimes scarcely perceptible; there is a prominence or broad papula caused by infiltration and congestion, which is the ordinary seat of the pruritus; there is an especial tendency on the part of the skin to *excoriate and bleed*; there is an obstinate persistency of the affection; there is a considerable defect of healthy nutrition of the skin as marked by pigmentation; and, above all, there is a decided association of the cutaneous disease with irritability and debility of the nervous system, and especially with that irritability of the organic nervous system which is the essence of hysteria.

This peculiar affection has been under my careful observation for a number of years and has formed the subject of several papers which I have read before the Medical Society of London, or published in journals from time to time. In describing this affection it is necessary to divide my cases into two groups, one dependent on general functional debility, especially marked by nervous debility and defective sanguification, the other group being primarily due to a weak and irritable state of the organic nervous system, such as constitutes the basis of hysteria. I

may better illustrate the kind of affection to which I am referring by the narration of a case.

CASE 1.—A maiden lady, aged 47, has the face spotted over with small abrasions from which the epidermis has been recently removed. The excoriations are oval or polyhedral in figure, for the most part square or oblong, and sometimes pointed towards the inferior margin; they are about a quarter of an inch in diameter. There are from fifteen to twenty spots of this kind scattered over the forehead and face, but of this number only three or four are perfectly fresh, the rest represent advancing but more particularly declining stages of the affection. The patient's attention is first directed to their existence by a sensation of fulness, burning, and tingling, and this sensation will continue for some hours, indeed, until she is driven to seek relief from the irritation by rubbing or scratching. The effect of a very slight rub is to detach the cuticle, which seems to slide off the spot and thus bring into view the excoriated patch which I have just been describing, and the excoriation is accompanied with bleeding to a greater or less degree.

The pathological history of the affection is that of a hyperæmia, which gives rise to a flat, circumscribed induration, accompanied with slight redness, and with the sensation of fulness, burning, and tingling already noticed; and then a slight serous exudation beneath the horny epidermis sufficient to loosen the cuticle but rarely sufficient to develop a blister; these several processes occupying only a few hours in their progress. Moreover, the morbid process is chronic, having existed in this lady for nearly two years, and the development of the spots being successive, they present, at the same time, a series of stages of growth. In one place a slight redness, occupying an indurated base without prominence and consequently neither a papule nor a tubercle; in another, a bleeding excoriation; in a third an

excoriation encrusted with blood, sometimes a dry spot of a reddish-brown colour; and after healing, a pigmentary stain of various depth of hue.

In these several stages of pathological development we find an explanation of the different symptoms which accompany the process, the burning and tingling which attend the hyperæmic congestion, the aborted vesication which serves as a relief to the distended capillaries, the active hæmorrhage which proceeds from the vascular spot when its vessels are ruptured or torn, and the consequent ease to the painful sensation, and the black scabs composed of desiccated blood which afterwards ensue.

One symptom only is not explained by the pathological process, and that is the strongly marked pigmentation, for which a cause must be sought more deeply in the economy, possibly in those visceral organs which are under the governance of the great cyclo-ganglionic system of the abdomen, and which are intimately connected with the origin of the nervous disorder.

This case may be taken as typical of the affection and as exhibiting an equally balanced series of symptoms; but in all kinds of disease, as in most other vital phenomena, the symptoms are liable to variation. I have seen cases in which, from the intensity of the pruritus, the idea has been suggested of prurigo; I have seen other cases in which the combination of heat, tingling, and vesication has raised a suspicion of herpes; and others, looking to the presence of large vesicles, almost bullæ, in association with pigmentation, that more nearly resembled pemphigus than any other cutaneous affection. But the most interesting of the associations which are connected with this disease are some curious hæmorrhagic and neurotic forms of the complaint, which are apt to occur in young females, and which have unwittingly been ascribed to malingering.

The appearance of the patient whose case I am now narrating is that of a decidedly nervous person ; she is shy, silent, dejected, seemingly occupied with her inward self, and desirous of shunning observation. The face is darkened by pigmentation, as well as being spotted by abrasions and their consequences. She complains of pains in her head, occipital and frontal, and also of much exhaustion and debility. The pulse is weak ; her nutritive functions are defective ; but those of digestion and excretion are fairly regular. Amenorrhœa has prevailed for about three years, and she has some ovarian pain on the right side.

Her previous life had been one of average health ; but at the age of 20 she was subject to occasional attacks of fainting, and of recent years has had considerable strain thrown upon her nervous system. For a few weeks previously to the affection of the skin she was engaged in reading to a deaf person, five hours a day, in a close, hot room. This gave rise to considerable exhaustion, which was increased by her anxiety to perform her duty satisfactorily ; and the nervous excitement and debility consequent on her exertions became a predisponent of the cutaneous disorder. In this state, a trivial cause—namely, the eating of ice—became the first motive impulse of the affection of the skin, which at once broke out around her mouth. She then by accident bruised her nose, and a second attack of the disorder showed itself on and around the injured organ. While a third attack became developed on the forehead, as the consequence of a draught of cold air. The swarthiness and deep pigmentation of her skin became manifest about six weeks after the commencement of the cutaneous affection ; and in reference to the spots, she observed that they were introduced by a feeling of fulness, burning, tingling, pricking, and itching ; if left to themselves, they frequently gave rise to a small blister, but that in general she

had no chance of peace until she had rubbed them or scratched them and produced a flow of blood, and in that case the uneasiness ceased.

The briefest definition that I can give of this affection is as follows: hyperæmia, with induration, in small oval or quadrangular spots of about a quarter of an inch in diameter; a sense of fulness, burning, tingling, pricking, and itching; sometimes a vesication corresponding with the diameter of the congested spot and very slightly raised; sometimes an excoriation produced by rubbing or scratching; more or less hæmorrhage, followed by a black crust; on healing a pigmentary stain; usually pigmentation of the entire skin to a greater or less extent; and accompanying these symptoms a state of general nerve-disorder, sometimes assuming the characters of hysteria.

The form of disease which I am now describing is local, but it appears occasionally as a general affection. In the present instance it was limited to the face—a region more liable to its occurrence than any other part of the body. I have likewise seen a well-marked example restricted to the forearm, and especially to the district supplied by the ulnar nerve. When it occurs as a general affection, it is apt to be mistaken for ordinary prurigo; and although more common in the female than in the male, I have also met with the general form in an adult man.

This curious affection brings to our mind cases which some of us may have seen, and others have found reported, under the denomination of spontaneous hæmorrhage from the skin, hæmatidrosis, and vicarious menstruation, and notably those more extraordinary cases of religious neuropathia which are manifested by hæmorrhage from the hands and feet and from the left hypochondriac region—the so-called *stigmata* of the crucifixion of our Lord. By the pathology of neuropathic excoriations of the

skin, we are supplied with two out of three factors necessary to the production of such *stigmata*, namely, general neuropathia and local cutaneous hæmorrhage; the third factor only is wanting, and that it is evident must stand in the relation of a predisposing or remote predisposing cause to the rest of the phenomena. Thus it is not difficult to conceive, that, in one case, the predisposing cause may be a perverted religious enthusiasm, while in another case it may be a sexual irritation.

As this curious affection, consisting of neuropathic excoriations with hæmorrhagic stigmata of the skin, has not hitherto been described by dermatological authors, and as it is one of considerable physiological as well as pathological interest, I trust I shall be excused if I narrate several additional cases with a view to its illustration.

CASE 2.—A young lady, aged 22, of average health and presenting the general appearance of a healthy condition, has on her left forearm, its ulnar side, and extending from the elbow to the wrist, a diffused blotch of mottled redness that suggests the idea of inflammation of the skin. On close examination the blotch is seen to be composed of small red patches of a circular figure, and about half an inch in diameter, and the skin between the patches or spots is somewhat suffused. The whole of the ulnar side of the forearm is slightly swollen, and at the same time sore and tender to the touch. There is a kind of general distribution of the spots in the direction of the longitudinal axis of the arm, some of the spots are crescentic with the horns directed upwards, and crossing the surface obliquely from below upwards are several longitudinal parallel lines which suggest the idea of scratches with the nails. This then is the general aspect of the morbid portion of the skin, suffused with redness, slightly swollen, blotched with small circular spots or stigmata, some being crescentic, and six or eight longitudinal red

lines, in pairs, perfectly parallel, about half an inch apart and united at the furthest extremity by a well-defined crescentic line.

Upon nearer examination, each of the circular spots is seen to be an excoriation, a dry excoriation, the cuticle is gone and the surface red and punctated from the desiccation of minute points of blood effused by wounded papillæ. The patches have the appearance of slight burns or scorches, just deep enough to destroy the cuticle and reach the papillary layer of the corium. Or they might be compared to superficial excoriations caused by the nails or by a graze.

These excoriations and grazes are generally met with in highly nervous, anæmic, and sometimes hysterical females, and are very commonly associated with a suspicion of *malingering*. The abrasions may have been occasioned by the nails, but in contradiction to this view they are perfectly circular. The semilunar spots look very like the produce of a dig with the nails, but they are few in number as compared with the circular spots. Then there are the oblique lines four or five inches in length, which are precisely like scrapes with the nails, but they are also exactly parallel and connected at the end by an accurately curved line; they look indeed more like the impression that would be made by a piece of heated wire, shaped like a hairpin and bound tightly to the skin, inasmuch as the space between the lines is not at all reddened. The result therefore of careful investigation and equally careful thought is, that there is no *malingering*, or, if there be, it is so clever that I have failed to discover it. In this particular instance I believe, *malingering* to have been utterly out of the question, and it was equally out of the question in all the cases of a similar kind that have come under my notice. In my young patient there has been a crop of the same patches on the back of the forearm and wrist; these patches are now healed;

they have a purplish red hue, as if the normal capillary circulation were not yet restored; they are a little depressed in the centre, and the area is occupied by a thin layer of dry and imperfectly developed cuticle. These are appearances which would not have followed slight excoriations with the nails in a normal state of the skin.

The history of the case as detailed by the young lady herself is not uninteresting. On a Sunday evening in the month of November 1869, she felt a pain and stiffness in the right elbow, and had a sense of weight in the whole forearm. She is aware of no cause for the attack, no exposure to cold, no injury, no disordered health. The next day there appeared on the inner side of the forearm a few small circular red spots; they were attended with soreness. Then they felt hot and burning and the cuticle was slightly raised; next the cuticle broke or was rubbed off, and an issue of a serous fluid took place somewhat copiously. Subsequently the surface "festered," that is, it took on a semipurulent action, then it dried up and became puckered, next it showed a tendency to bleed on the slightest abrasion or even with the motion of the arm, and later on the spots assumed the character already mentioned, or they healed up with the purplish depressed surface above described. This process was repeated day after day, and in this manner the disease has been perpetuated until the present time.

In a pathological point of view the above-described process is perfectly intelligible; in the first place there was neuralgia affecting the elbow and the nerves of the forearm, and especially its ulnar district; and then followed a somewhat similar train of symptoms to those met with in herpes, but of a chronic instead of an acute type. There were soreness, burning heat, the partial formation of a blister, the evidence of a serious lesion of the skin; and then a retrograde process leading to the

restoration of the integument. Another illustration of a similar kind is the form of cutaneous lesion that is apt to follow the severance of a spinal nerve, or an injury of a vaso-motor nerve.

She states that the first suffering she experienced in the elbow was such as might have resulted from a sprain; in two or three days the pain was more severe, and at the time of consultation the limb felt heavy and benumbed. She is unable to lift anything weighty; the hand and fingers have lost their power; she carries the forearm semiflexed, and dreads to extend it on account of the tender state of the skin, and, for the same reason, she shudders at rough contact of any kind. She speaks of the blistered stage of the skin affection as being attended with a "fearful burning," and the slightest pressure, while in that stage, as resembling "hot needles" piercing the skin.

In these symptoms we have ample evidence of a state of nerve-lesion or of a neuropathic condition of the limb, and the general medical history of the patient corroborates this view. Fourteen years ago, she received a blow on the summit of the head from a nail, and the hair fell off the injured spot as in alopecia areata. I have described elsewhere the occurrence of alopecia localis and alopecia areata as an occasional consequence of local injury of the scalp, and was not unprepared for this result. Since that time the hair has grown and fallen off again repeatedly, and at present there are two circular areæ which are only partially covered with hair.

Three or four years back she suffered under another neuropathic affection, namely, a severe attack of urticaria; and recently she has had a similar invasion, attended with symptoms of unusual violence.

Eighteen months ago she had a tooth extracted; some injury was done to the alveolus; she then had the misfortune to fall down stairs and damaged her

jaw to a further extent. The double shock to her nervous system excited hysteria, and she has been considerably shaken in health ever since.

A few months later she had become listless and depressed in spirits; she was fidgety and irritable, and lost her appetite. Then menstruation became irregular and painful; it was protracted in its period and interval and attended with much suffering. This state of disordered menstruation continued up to the time of the neuralgic and cutaneous attack in her arm and then subsided into a natural and regular state. The affection of the arm would seem to have become the substitute for the menstrual disorder. But even now she is made aware of the approach of the menstrual period by an increase for a couple of days of the pain of the arm, and the tenderness and irritability of the skin.

At Christmas, this young lady was tormented with a troublesome nervous cough; and a month back was seized with sickness and vomiting which continued for three weeks. Nevertheless, with all this long catalogue of pains and sufferings, her health and strength have suffered very little, and she bears the ordinary aspect of health. She has evidently no organic disease; and all her symptoms, however varied, may be traced back to that form of nerve disorder which is generally expressed and understood by the term hysteria.

As usual in these cases there is a certain amount of hyper-pigmentation of the skin which gives her complexion a muddy appearance.

CASE 3.—On the 11th of May, 1869, I saw, in consultation with Mr. George Gwyn, of Hammersmith, a young lady, aged 17, in whom the right side of the face was spotted over with small excoriations, having an average diameter of about a quarter of an inch. Some of the excoriations were fresh and bleeding, others were red and dry; amongst them were a few flat and slightly raised bullæ; and in

other places were brown stains marking the seat of healed spots of a similar kind. The present eruption had existed for three weeks, and the spots had made their appearance in succession; so that, as is usual in successive eruptions, the different stages of the affection were all visible at the same time.

The patient was a well-grown girl, but somewhat pallid in countenance; the conjunctivæ slightly anæmic, and her flesh wanting in the firmness of health. She stated that the outbreak of the excoriations was preceded by headache, but in other respects she felt well, and the menses were regular.

Mr. Gwyn informed me that the present was the fourth attack of the affection which the young lady had experienced. The first occurred in the early part of the preceding year when it had been proposed that she should be sent to school. As soon, however, as it was decided that, in consequence of this eruption, she should take a trip to Paris instead of going to school, the eruption immediately got well.

Having recovered from the first attack, her education again became the subject of consideration, and she was accordingly placed in a school at Neuilly in the month of May. At the end of a few days the eruption renewed its invasion, and, after some tonic treatment which proved unavailing, she was recalled home, with a similar result to that of the former instance, the eruption speedily disappeared.

Seven months afterwards, namely, in January, 1869, the experiment was repeated of sending her to school; and, again, for the third time, the same consequences ensued. On this latter occasion her general health was evidently compromised. She was brought home on the 20th of February, and, as before, in the former instances, she recovered in a short space of time.

In the month of May the subject of school was revived for the fourth time, but in this instance

without being carried into effect. The mere mention of school seemed sufficient to set up the morbid process which gave rise to the affection; and it was under the influence of this renewed attack occurring for the fourth time that she was seen by me, in consultation with Mr. Gwyn, on the 11th of May.

It may be further added that, from early childhood, this young lady had always evinced an "aversion" to leaving home; and the scheme of school being given up in favour of teachers at home, she has entirely recovered her health. Since the last attack she has continued to be, and is now, on the report of Mr. Gwyn—bearing date March, 1872—in excellent health.

The singular peculiarities of this case very naturally raise up in the mind the suspicion of malingering. Mr. Gwyn did not escape that suspicion; for in conference upon the case, and writing on it subsequently, he observes that the eruption "took the appearance of spots made with the point of the finger, a bulla covering the surface, and resembling an inflammation such as might be set up by the application of croton oil." And the question takes the following form: Is this an instance of malingering; that is to say, the voluntary act of the patient, employing as her agent croton oil or some other violently irritative substance? Or is it a particular form of eruption, due to a recognizable pathological cause?

My own very decided opinion on the subject, founded upon a careful and anxious study of the affection, is, that it is not the product of malingering, but that it is a well-defined form of cutaneous disease, of neuropathic origin; and in the particular instance before us, while the predisposing cause was an aberration of function of the nervous system in general, the exciting cause was a moral depression, acting upon an already weakened nerve-territory,—namely, that of the fifth pair of nerves, and especially the nerve supplying the right side of the face.

I may mention parenthetically, and with the view to stimulate further research into this important matter, that once I had under my observation a case of malingering, in which the irritant employed was croton oil. But the pathological result was very different from the neuropathic excoriations: the skin was highly inflamed, it was swelled, it exuded copiously, and, in fact, the pathological state was identical with that of acute eczema; moreover, when the healing process was restored, there was no abnormal pigmentation, such as we meet with constantly in the neuropathic affection now under consideration.

It may be difficult at first sight to discover the relations between a dislike to the restraints of school and the development of a lesion on the integument; but a careful study of the physiology and pathology of the skin will render it equally difficult to conceive the means by which a lesion of a definite form, with a regular and definite succession of phenomena, prolonged for several weeks, can be produced and uniformly maintained by any external agent whatever, and that agent in the hand of a school-girl. If such were the fact, we must all bow to the exquisite tact of the accomplished artist.

Let us recur for a moment to the pattern which she has to follow. An oval spot, averaging a quarter of an inch in long diameter, distributed at intervals, with a general direction corresponding with the arteries of the region, developing upon its surface a slightly-raised and generally flat vesicle; on the bursting or removal of the vesicle, a more or less hæmorrhagic surface, drying into a red spot, as though seared by a heated instrument; sometimes a black scab, formed of desiccated blood; on healing, a pigmentary stain; a state of congestion of the spot, rather than inflammation, rarely any of the secondary phenomena of inflammation, such as pyogenesis; the spots never perceptibly raised, but always flat.

We will now pass on from these cases, which are obviously hysterical, to others occurring in the adult.

CASE 4.—A gentleman, aged 40, has led a life of change and activity. He was for some time in Australia, and several years since was wrecked during a sea voyage. Six years back he had an attack of typhoid fever, which left him very weak, and from the effects of which he has never recovered completely. Latterly he has indulged in stimulants to excess, and at present is nervous, excitable, and mentally depressed. The functions of digestion are ill performed, and his nervous system is in an abnormally irritable state.

In December, 1870, he consulted me for an eruption, consisting of red, prominent spots, round or oblong in figure, and ranging between three and four lines in diameter. They were remarkable for their situation, occupying the posterior and outer aspect of the shoulders and arms, together with the nates, thighs, and calves of the legs. There were very few on the inner side of the limbs, and none on the front of the trunk. This eruption had been in existence a year; and upon closer examination, spots were seen presenting every stage of progress; some were tumid and prominent; others were excoriated from scratching and exuded a transparent and colourless lymph; a few were covered with a thin crust. Some were purplish in hue, and exhibited various stages of flattening; then there were broad streaks left by the nails, and deep-brown stains where the spots had subsided. In some few situations also, and particularly on the calves of the legs, were excoriations irregularly shaped, produced by the tearing with the nails, of several adjacent spots into one. At a first glance, the eruption bore a strong resemblance, both in tint of redness and size of spots, to the large pimples of ecthyma; but the spots were not papular, they had a hard base, dis-

coverable by the touch; they had no tendency to suppurate, and they had no areola, but where they were elevated rose up directly from the skin. A similar absence of purulent exudation, together with uniformity of size, distinguished them from the patches of phlyctenous impetigo. But the predominant symptom of the affection was severe pruritus, which was nearly constant, and which induced violent scratching.

The patient has been suffering from this affection for upwards of twelve months, and has undergone a variety of treatment without success; he reports that for a short time he was benefited by sulphur and mercurial baths.

I prescribed for him a careful regimen and tonics with the hope of a good result; but at the end of some months his medical man reported that he was no better, and "that the itching and anxiety caused by the complaint utterly wear him out."

CASE 5.—A married lady, aged 28, has been for a period of four years tormented with this form of neuropathic eruption. It is developed, as in the preceding instance, on the shoulders, nates, and back of the thighs, and likewise on the scalp. Four or five years before the present attack she suffered from a similar affection which gradually wore itself out.

She is pallid in complexion; conjunctivæ white; tongue pale; much debilitated; appetite bad; liver and digestive organs sluggish; flesh soft; and, in figure, inclining to bulk.

A long course of tonic medicines, succeeded by arsenic, has made scarcely any impression on the patient; and it is evident that until she improves in assimilative power, and until the nervous system is strengthened, there will be little hope of her cure.

The leading features of the eruption may be thus enumerated: pruritus, inducing severe and unrestrainable scratching; its seat on the shoulders, hips,

nates, outer side of the thighs, and scalp; the lesion, a prominent flattened red spot, round or quadrangular and oblong in figure, between a quarter and half an inch in diameter; sometimes excoriated, and exuding a colourless or sanguinolent lymph; sometimes covered with a brown or blackish crust; interspersed with scratches made by the nails, and succeeded by deep brown pigmented stains. Another phenomenon is likewise frequently present in this eruption, namely, that the spot moves to the immediately contiguous skin, leaving its original site in a desquamating and healing state; and this progressive movement or migration may be repeated several times, so as to give rise to an oblong patch presenting various stages of progress and decline.

If, now, we take a retrospective survey of the five cases which I have just narrated, we shall find that while the local manifestation is pretty much alike in the whole of the cases, there are, nevertheless, some striking differences in the symptoms; in cases four and five, the pruritus was so excessive as to transfer them at once to the category of prurigo; in one and two, the burning heat, and prickling or tingling of herpes was the conspicuous symptom; whereas, in case three, the itching and burning were almost absent; and attention is, therefore, concentrated on the local lesion, consisting of loosening and separation of the cuticle, more or less vesication of a trivial character, and bleeding. In some instances there is a total absence of all soreness or pain, and the bleeding would seem to take place almost spontaneously. One young lady, in my presence, bled from several points on the hands when her gloves were withdrawn. Another, on being asked, when taking her place at the breakfast-table, what she had done to her face, was surprised to hear that there were several rills of blood streaming from as many bleeding stigmata on her temples

and cheeks. It was difficult for her relations to believe that such a state could exist without her knowledge or participation. In a third instance the patient derived a real gratification from tearing her wound open by means of a comb and with her nails, and could give no other explanation of the act than that it had become a habit. The tearing off of the loosened epidermis in the pruriginous variety of the affection would be sufficiently intelligible; but the utter unconcern of the patients in the hæmorrhagic form is very remarkable.

The following is a curious example of these hæmorrhagic stigmata:—

CASE 6.—A clergyman, aged 37 (March, 1872), has four superficial excoriations on the front of the head; two are lateral, occupying the upper angle of the forehead at either side, and two the middle line. The excoriations are situated on oval bases of congested skin, the ovals at either side measuring two inches by one inch, and the upper one on the middle line, five inches by one inch; the latter having been formed by the fusion of two or three lesser ovals. The general direction of the ovals is longitudinal, their long diameter being parallel and extending from before backwards; but the smaller of the four, situated at the upper part of the front of the forehead, has an inclination to the right side. The excoriations have, from time to time, occupied in succession the whole surface of these ovals, but at the present time (March, 1872) are restricted to a part only, namely, to the lower and front limb of the two lateral ovals, to the anterior extremity of the long oval on the scalp and about the lower two-thirds of the oval on the forehead.

These oval spots or stigmata have now been in existence for six years, sometimes contracting in size and receiving little notice, and at other times enlarging and displaying considerable activity. Sometimes there are two or three active spots on

the disk of the stigma while the rest is quiescent, the active points being always situated near the circumference; while, at other times, as at present, the excoriation assumes the figure of a curved band measuring about half an inch in diameter, and more than an inch in length.

A good general idea of the pathological characters of the stigma may be given by supposing an oval piece of blistering-tissue placed on the skin. If at the end of a short time this were lifted up, the surface of the integument would present the actual condition of the base of the stigma, red and very slightly swollen. We must now replace the blistering-tissue, and in so doing must suppose that it has adhered only by its front and lower border, so that on raising it for the second time, after the lapse of a longer period, the greater part of the base will have remained unchanged, but an indication of an incipient blister may be discovered at the part where the blistering-tissue actually adhered. The experiment has not been sufficiently prolonged to produce an actual blister; but the first stage in the progress of a blister has been accomplished, a serous exudation has taken place beneath the horny epidermis sufficient to loosen it from the rete mucosum; and a very moderate degree of pressure or friction is sufficient to accomplish the rest; the epidermis is wiped away, the hyperæmic corium is exposed to view, and bleeding to a greater or less extent takes place. This is the completed picture of the bleeding stigma or excoriation,—namely, capillary congestion, serous exudation, hæmorrhage; and but very rarely any other of the secondary processes of inflammation, such as those that belong to pus-generation. When the bleeding ceases, the surface dries up and heals, and a similar process is set up on another part of the stigma, or the bleeding may recur from time to time on the same spot. It is thus that, in the clergyman who is the subject of this report, the stig-

mata have lasted, sometimes better and sometimes worse, for a period of nearly six years, and may still continue for a considerable time.

One of the natural consequences of blistering is manifested by the long stigma situated on the scalp, namely, its denudation of hair. He remarks that, after combing his head on one occasion, he was struck by finding a considerable tuft adhering to his comb.

A striking feature of this curious affection is the absence of pain, of pruritus, and even of soreness. These bleeding stigmata would have given the patient no concern had they not appeared in a situation likely to attract attention. He brushed and combed his head without the least inconvenience, and almost without the consciousness of anything unusual. He declared that there was neither abnormal sensation nor itching; and if he sometimes caught himself in the act of carrying his fingers to the spot, it was the consequence of habit rather than of any inconvenience. On such occasions, the slightest disturbance of the dried excoriations would give rise to bleeding; but very frequently the hæmorrhage was entirely spontaneous; it would happen after wearing his hat, or, while engaged in study, his attention might be drawn to it by a sudden sensation of trickling, and then, upon putting his hand to the spot, he found there was blood.

The subject of the case now described is a zealous labourer of the Church of England, one whose zeal and self-abnegation lead him to attempt more than the physical power of one man is capable of performing. Hours early and late; neglected meals; anxious and incessant work—have weakened his nutritive functions and nervous system, and induced exhaustion and prostration. Here are the conditions the most favourable for producing neuropathia, and, with general neuropathia, a neuropathic affection of the skin. He is pallid; the conjunctivæ slightly

anæmic; the complexion muddy and discoloured; flesh soft and flabby; appetite poor; and the functions of digestion and assimilation imperfectly performed.

A striking example apparently of this same affection, associated with hysterical and ecstatic phenomena, recently gained some celebrity in Belgium, and has been made the subject of an essay by Dr. F. Lefebure, Professor of General Pathology and Therapeutics in the Catholic University of Louvain. The title of the essay is: "Louise Lateau, de Bois d'Haine; sa vie, ses ecstases, ses stigmates"; and its date 1870.

Anne Louise Lateau is the third daughter of an operative metallurgist at Bois d'Haine, a village in Hainault, near to Louvain, in Belgium. She was born on the 30th of January, 1850, and was therefore 20 years of age at the date of her memoir penned by Dr. Lefebure.

Her father was a healthy man, but died of malignant smallpox on the 17th of April, 1850, his daughter Louise being at the time only ten weeks old. Her mother's life was despaired of at the birth of this child; she was unable to leave her bed for several weeks, and was not completely restored to health for two years and a half. The cottage in the mean time was left to the care of the two other children, the eldest, Rosina, being only three years of age. The infant Louise then took the smallpox, and the place was shunned and deserted by the neighbours. Twelve days after the father's death a fellow-workman found the infant Louise in a state of starvation, encased in a crust of dried poultice which had been ordered by the doctor a week before.

Such was the introduction into life of Louise Latour; the family were plunged into the deepest poverty in consequence of the death of the father, and she was sustained on the most scanty and poorest food. At eight years old she was employed to

take charge of an old woman, helpless from age and infirmity. At 11 she became the attendant of her great-aunt, aged 78, and underwent considerable hard labour and fatigue. On the death of her great-aunt, she went into service at Brussels, but at the end of seven months fell into bad health, which lasted for several weeks; she then obtained another situation, and subsequently returned to the parent roof to help her mother, and was chiefly occupied with needlework.

At the age of 20 Dr. Lefebure thus depicts her appearance:—She is above the middle height; her face plump; complexion clear and rosy; skin fine in texture; hair fair; eyes blue, limpid and transparent; mouth small; white and regular teeth, features agreeable and intelligent. Without being robust, she has good health and a good constitution; her functions are properly performed; she has no indication of scrofula, nor of any kind of morbid diathesis.

In the year 1867, being then 17, she fell into a state of great debility, with extreme languor, loss of colour and loss of appetite—in a word, she presented the ordinary phenomena of chlorosis. In September she was seized with pharyngitis, which nearly cost her her life, but recovered at the end of three weeks. After this attack, the anæmia increased, accompanied with neuralgia, which attacked several parts of her frame, but was most severe in the head; then she suffered from eczema of the left forearm, accompanied with swelling in the axilla, and abscess.

In the following year, 1868, in the month of March, her age being 18, the loss of appetite is reported as complete; for a month she took scarcely anything but water and medicine, and was so reduced that the last sacrament was administered to her on the 15th of April. At this period the neuralgic pains had become very violent, and, on several occasions, she spat blood, the source of the

blood being undetermined. It is especially noted that the first occasion of spitting blood was on Passion Sunday, March 29th, and the last on April 15th.

From this date she suddenly improved in health; on the 19th the menses appeared for the first time, and lasted three days, and during this rapid recovery she evinced phenomena of cerebral excitement, speaking of holy things in rapturous and high-flown language, of God, of the priesthood, of poverty, the love of suffering, and charity.

It may be observed, that, in consequence of the necessities of her mother and the calls of labour, her education had been greatly neglected, being chiefly of a religious character, such as she was enabled to acquire at church or in intercourse with her confessor. However, as Dr. Lefebure remarks, she is intelligent, although she reads with difficulty and writes incorrectly; and he likewise observes, that she is fond of silence and solitude.

Since its first appearance, menstruation has been perfectly regular; but three days after the cessation of the first discharge, namely, on Friday the 24th of April, she experienced a spontaneous bleeding from the skin of the left side of the breast, at a point corresponding with the space between the fifth and sixth ribs, and externally to and a little below the nipple.

On the succeeding Friday, the bleeding from the skin of the chest was repeated, and, at the same time, similar bleeding spots appeared on the dorsum of the feet. On the following Friday (May 8th) the hæmorrhage was repeated in the early morning on the chest and feet, and at nine o'clock became developed on the palms and corresponding part of the back of the hands.

The hæmorrhage from these different points had now become periodical, and was repeated regularly every Friday up to the time of the report—that is, for a period of two years.

On the 25th of September of the same year there was, likewise, concurrently with the other bleedings, hæmorrhage from the forehead, which was less regular than the former, but was repeated more than thirty times.

The appearance of the skin during the intervals of bleeding is thus described by Dr. Lefebure:—On the back and palm of the hands is an oval spot about three-quarters of an inch in long diameter, smooth, dry, and slightly redder than the adjoining integument. On the sole of the feet the spots are similar to those on the hands and of a pale rose-colour; while on the dorsum of the feet they have the form of an oblong square, are rounded at the angles, and an inch in length. The spot on the breast is similar in figure and one-third of an inch in diameter. The skin of the forehead presents no signs of alteration, and when the bleeding from any part of the skin is suspended for several weeks the integument regains its normal appearance.

Viewed with a lens magnifying twenty diameters, the epidermis is seen to be thin but unbroken, the papillæ have the appearance of being “atrophied” and flattened; and it is this state of the papillæ which gives the affected skin its abnormal smoothness.

The mechanism of the active stage of the process is described as follows:—At about midday on Thursday a bulla begins to rise on the congested spots; it occupies their whole extent, and when completed is hemispherical in figure, the contents being a limpid transparent serum. In the course of about twelve hours the blister bursts, the serum escapes, and blood begins to flow; the moment of appearance of the blood being between twelve and one on Friday morning. The sanguineous discharge usually carries with it the cuticular flaps of the bulla, so as to bring into view the surface of the

derma; but occasionally, though rarely, where the cuticle is thick, as in the palms and soles, a portion remains unbroken, and the blood concretes into a clot.

The number of bleeding spots or stigmata is nine: four for the feet, the same number for the hands, and one for the left breast; the hæmorrhage generally begins in the latter, and is then taken up successively, but without regular order, by the rest. On one occasion, the bleeding from the breast proceeded from three equidistant puncta, suggesting the points of a triangle, without ampulla, and without alteration of colour of the intermediate skin. This is the plan of the process on the forehead, where the bleeding puncta are from twelve to fifteen in number; while on four occasions Dr. Lefebure detected hæmorrhage issuing from the scalp, which gave rise to clotting of the hair. The bleeding puncta are frequently triangular in figure, like a microscopic leech-bite; at other times they are semilunar or irregular.

The puncta on the forehead occupy a kind of band or zone midway between the hairy scalp and the eyebrows; the skin occupied by this zone is slightly turgid, aching, and painful to the touch. At first the bleeding from these puncta was exceptional, but subsequently made its appearance every Friday: the author terms the zone "*la couronne sanglante du front et de la tête.*"

In the early days of the stigmata, the bleeding continued for twenty-four hours, from midnight to midnight. In August, 1868, it ceased at four or five o'clock in the afternoon; and in February, 1870, ended at eleven in the forenoon or at midday. It was estimated that at first the quantity of blood lost on each occasion—that is to say, weekly—amounted to one quart. Four months later—namely, in August, 1868—the quantity was reduced to somewhat less than half a pint.

Now, in this remarkable case of neuropathic disorder, accompanied with vesication of the skin and hæmorrhage, we perceive a curious resemblance to the cases of "neuropathic excoriations" which I have just been describing,—a resemblance which is, indeed, pathologically identical, and only differs in the striking character of its periodical recurrence,—a feature by no means strange to physiology and pathology.

The history of this girl is exactly such as would be calculated to establish a neuropathic constitution. Born of a mother prostrated with illness; deprived of natural food and almost starved; extricated from the dried shell of a poultice in which she had lain for a week; the victim of smallpox when she was two months old; poorly nourished; driven to service at 8; an illness of upwards of three months at 13; and no effort of menstruation until she was 18.

At the age of 17 she underwent extreme prostration and debility with anæmia, assuming the character of chlorosis. She had a severe attack of pharyngitis, with neuralgia, eczema, and axillary abscess.

Her eighteenth year was ushered in with neuralgia and total loss of appetite; for a month she took nothing but water and medicine; and, presuming her to be beyond hope, she received the last sacrament. On the 29th of March, being Passion Sunday, she spat blood; and on several occasions between that date and April 15th, when she received the last sacrament, she did the same. Four days after this event menstruation occurred for the first time, and lasted three days; and she was so much relieved by the occurrence, that on the 21st of April she walked to the parish church, nearly half a mile distant.

During the menstrual period she evinced certain mental phenomena, which were supposed by those around her to be due to a visitation of divine light;

she spoke excitedly of holy things, but there was no indication of trance; and at church she received a kind of ovation from a marvel-loving crowd, her strange history and miraculous recovery being magnified extravagantly.

Three days after her visit to church—namely, on Friday, April 24th—the bleeding stigma appeared for the first time on her left breast; on the following Friday it showed itself on the breast and back of the feet; and the Friday after on the breast, feet, and hands. Moreover, five months later—namely, in September—it first appeared on the forehead. Finally, on the 17th of July she became the subject of trance.

The neuropathic organization is therefore very evident in this case. There were pains accompanying the hæmorrhage, but the nature of those pains was not noted. The remaining symptoms were such as are common in the neuropathic excoriations, but doubtless greatly exaggerated, and further marked by the periodic element, which is explicable by the habits of life of the patient,—the periodically-recurring Friday, its ceremonies and sights, and, to the sensitive and uneducated mind, no doubt its ghastly reminiscences.

In the cases of this affection, this evident nerve-lesion, which I have collected, the vesication only rarely reached the dimensions of a bulla, and the subsequent hæmorrhage was comparatively small; but with the more active congestion implied by a bulla, a pemphigus, in fact; the more copious hæmorrhage might have been expected which was found in this case of pemphigus hæmorrhagicus.

If now we turn our attention from the pathological phenomena of this curious affection to its therapeutical considerations, we shall find that the indications for treatment are simple and obvious; namely,—first, to improve assimilation and nutrition, and secondly, to invigorate innervation, to

which may be added local protection and stimulation. The former indication will bring into play nearly the whole of our tonic remedies; and the latter, oxide of zinc in lotion and ointment, solutions of chloride of zinc, preparations of tar and mercurials. A generous and nutritive diet is of the first importance, and arsenic as a means of assisting its appropriation.

DERMATALGIA, or neuralgia of the skin, is best illustrated by the aching and prolonged pains, sometimes associated with herpes; occasionally preceding the eruption, at other times following it. It is no uncommon thing to find these pains continuing for several months and years, and often for many years, leading to the belief that the structure of the nerves must have undergone some organic change. Dr. Duhring, of Philadelphia,* has published a case of painful neuroma of the skin, which illustrates the matter now before us. The patient was an Irishman, aged 70, and for ten years he had been the subject of small ganglionic enlargements developed on the nervous filaments within the substance of the skin; the seat of the disease being the shoulder, region of the scapula, and outer side of the upper arm. The enlargements or tubercles ranged in size between that of the head of a pin and a pea; they were first perceived over the insertion of the deltoid, and at the end of four years the surface of the skin was thickly nodulated over the whole of the affected region, the tubercles projecting to an elevation ranging between one line and a third of an inch and something more. They were hard to the touch, pink in colour when isolated, purplish when aggregated, and during a paroxysm of pain purple and livid.

* "American Journal of the Medical Sciences" for Oct., 1873, p. 413.

For the first four years these small tubercular masses were unattended with pain, a little itching being all the sensation which accompanied them, but at the end of this period they became the seat of the most violent paroxysms of intense agony, a pain which the patient defined as resembling a stream of ice-cold water flowing down the arm, aggravated by burning heat and pricking. The tubercles are at all times somewhat painful to the touch, but during the paroxysm the sensibility of the part becomes exquisite; the slightest pressure occasions torture, and even a breath of air increases the suffering.

The paroxysms are repeated twice or three times, or oftener, during the day, and are quickly aroused by mental emotion, pressure, cold, change of clothing and changes of the weather; the day before a storm or change of weather they are very troublesome; they are frequent in rain and snow, and most seldom in summer and winter. The paroxysm lasts for a period varying between ten minutes and an hour; when severe, the greatest intensity of the suffering may continue for ten or fifteen minutes, and the entire paroxysm be prolonged for two hours. At its height the pain shoots down to the knuckles of the hand, and radiates upwards, forwards, and backwards from the shoulder, reaching the side of the head and producing a buzzing sound in the ear. But with all this suffering the man's health was not much affected, his appetite and digestive functions were good, and he slept composedly in the intervals of pain, being sometimes roused from his sleep by the occurrence of a paroxysm.

Dr. Duhring exhausted the pharmacopœia in his trial of remedies to relieve these paroxysms without avail; subcutaneous injection of morphia in large doses proved useless, and no remedy was nearly so efficacious as heat.

Such was the state of the patient in the tenth year of this terrible disease, when it was deemed necessary that something curative should be attempted, and when, after an anxious consultation with his colleagues, Dr. Maury determined to cut across the brachial plexus near to the vertebral column, and where it consisted of two large cords, and to remove a portion of each. The operation was performed carefully and successfully, with no shock to the constitution, and with a result which must be regarded as highly satisfactory; the arm became insensible and paralyzed, but the pain ceased, excepting at the top of the shoulder, a point supplied by the third cervical nerve. Dr. Bertolet makes the following remarks on the portion of the plexus which was removed: "In the secondary fasciculi in many places were seen accumulations of young migratory cells (granulation cells of Virchow). The aggregation of these elements between the primitive nerve-fibres was so great as to press them widely asunder at numerous points and lead to a corresponding atrophy of the individual fibres. The axis cylinders were seen distinctly in every instance, the atrophy having taken place mostly at the expense of the surrounding medullary substance. The nerves that underwent these atrophic changes presented a very bright, highly refractive glassy appearance under the microscope, strongly reminding one of amyloid degeneration. . . . These bright spots occurred in circumscribed areas of the nerve-bundles, while in the remaining portions the nerve-fibres were unaffected, there having been just the faintest suspicion of commencing proliferation of the interstitial substance. . . . We do not find the same material growth of connective tissue, nor the attendant fatty metamorphosis usually seen in marked cases of neuritis interstitialis, yet the alterations found are sufficient to indicate that this nerve has

already fully entered the earlier stages of these inflammatory changes.”*

At a former microscopical examination of some of the tubercles excised for the purpose, Dr. Duhring could discover nothing more than a mass of white fibrous tissue-strands closely and densely felted together, and no trace of nerve-filament, although there can be no doubt that the fibrous neurilemma was the focus of development of the hypertrophied tissue. In this examination Dr. Duhring ascertained that the epidermis and rete mucosum had undergone nutritive changes, and that the papillæ cutis were in a state of hypertrophy.

The problem of the probable persistence of the morbid process has not yet had time to be solved. Dr. Maury's report extends to only six months after the operation; and at this time there was an occasional recurrence of the painful paroxysms, but of less severity than before.

HYPERÆSTHESIA and ANÆSTHESIA are both without special illustrations in our Dermatological Collection, and therefore may be dismissed in a few words. We occasionally meet with extreme and abnormal cases of exaggerated sensibility of the skin, and numerous examples in practice of the tolerance of pain by different individuals; that which would be a trifling irritation to some giving rise in others to excessive suffering. I once had a patient under my care who could barely support the weight of her clothes, and was unable to lie in bed at night on account of the pain of her skin induced by the mere pressure of the weight of her own body. Another patient complained of sounds being painful to his skin; and a taste of metal being experienced on the palate when he handled metal. While the spasm

* “American Journal of the Medical Sciences” for July, 1874.

and pruritus of urticaria are easily engendered in some persons by the pressure of the body in bed.

Anæsthesia rarely occurs as an idiopathic affection, but is commonly met with in association with certain diseases of the skin, such as alopecia areata; morphœa; scleriosis, and elephantiasis. One form of elephantiasis is especially distinguished by the subjective title of "anæsthetica"; and, as we know, this state of insensibility, originating in numbness, may go on increasing until the application of fire to the skin is unrecognized by the sufferer.

I have now, Mr. President and Gentlemen, only to thank you for your attention to these lectures, and to express the hope that we may all meet another year to see them resumed.

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